

**Anti-Oppressive, Community-Engaged Praxis in the
Study of Chronic Pelvic Pain and Interpersonal Violence**

BY

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THESIS

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DEDICATION

To all people impacted by violence, its rippling impacts, their individual and collective healing journeys, and their sources and expressions of resilience.

To my family. I love you all.

To Michael, my husband, best friend, family medicine and addiction medicine physician, and dad to our remarkable son, Lucas. I love you both deeply. I look forward to our new dance every day. I would not be here without you, nor would I have had nearly as much fun! Lucas, I am in awe of you. You are a keen social scientist already, joyfully discovering the beauty, intricacies, and connection all around you. I am becoming a better version of myself as your mom. You are my happiest and most meaningful blessing. Michael, thank you for your love, care, enthusiasm, humility, and reflective engagement in my work over the years. Your first-hand experience with patients facing challenging health impacts, particularly CPP, and interpersonal violence, validated this novel and much-needed study in public health. It's an honor and joy to go through life together.

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LIST OF ABBREVIATIONS

ACT	Acceptance and commitment therapy
ACEs	Adverse childhood events
ACOG	American College of Obstetricians and Gynecologists
ADHD	Attention-Deficit/Hyperactivity Disorder
AJPA	American Journal of Public Health
ANS	Autonomic nervous system
CAM	Complementary Alternative Methods
CBO	Community-based organizations
CBT	Cognitive behavior therapy
CBPR	Community-based participatory research
CC	Chronic constipation
CCA	Constant comparative analysis
CER	Community-engaged research
CDC	Centers for Disease Control
CFS	Chronic fatigue syndrome
CHJ	Collaboratory for Health Justice
CHET	Community Health Equity Trauma
CM	Childhood maltreatment
CSA	Childhood sexual assault
CNS	Central nervous system
COPC	Chronic overlapping pain conditions
CP	Chronic pain
CPP	Chronic pelvic pain
CPT	Cognitive processing therapy
CRD	Co-Researcher debrief
CSA	Childhood sexual assault
DBT	Dialectical behavioral therapy
DCA	Directed content analysis
DSM-5	Diagnostic and Statistical Manual of Mental Disorders
DV	Domestic violence
DVP	Division of Violence Prevention
FM	Fibromyalgia
GBV	Gender-based violence
GNC	Gender non-conforming
GTM	Grounded theory method
HPA	Hypothalamic-pituitary adrenal
HIV	Human immunodeficiency virus
IBS	Irritable bowel syndrome
IBS-C	Irritable bowel syndrome-constipation
IC/BPS	Interstitial cystitis/bladder pain syndrome
IPV	Intimate partner violence
LUTS	Lower urinary tract symptoms
MAPP	Multidisciplinary Approach to the Study of Chronic Pelvic Pain (MAPP)
MMR	Mixed Methods Research
MST	Mensendiek somatocognitive therapy
NIDDK	National Institute of Diabetes and Digestive and Kidney Diseases

LIST OF ABBREVIATIONS (Continued)

NIH	National Institutes of Health
NPIEV	National Partnership to End Interpersonal Violence Across the Lifespan
NISVS	National Intimate Partner and Sexual Violence Survey
OAB	Overactive bladder
PNS	Parasympathetic nervous system
PP	Pelvic pain
PFD	Pelvic floor dysfunction
PFM	Pelvic floor muscle
PM & R	Physical Medicine and Rehabilitation
PLUS	Prevention of Lower Urinary Tract Symptoms Research Consortium
PT	Physical therapy
PTNS	Percutaneous tibial nerve stimulation
PTSD	Post-traumatic stress disorder
RAP	Recurrent abdominal pain
SA	Sexual assault
SAMHSA	Substance Abuse and Mental Health Services Administration
SEM	Social-ecological model
SES	Socioeconomic status
STDs	Sexually transmitted diseases
SDOH	Social Determinants of Health
SPH	School of Public Health
SUB	Substance use disorders
SV	Sexual violence
SNS	Sympathetic nervous system
TDV	Teen dating violence
TENS	Transcutaneous electric nerve stimulation
TI	Trauma-informed
TIA	Trauma-informed approach
TIP	Trauma-informed principles
TMD	Temporomandibular disorder
UCPPS	Urologic chronic pelvic pain syndromes
UIC	University of Illinois Chicago
US	United States
UN	United Nations
UTI	Urinary tract infection
VAW	Violence against women
WHO	World Health Organization

SUMMARY

Interpersonal violence experiences are often traumatic and result in adverse health and social outcomes across the life course. My dissertation used a case example of chronic pelvic pain (CPP). In public health, CPP is an under-researched, prevalent, and chronic condition that impacts adolescent (prevalence rates range from .3 to 19%) and adult females (affecting approximately 15% of women in the U.S.) and is comorbid with mental illness, other chronic pain conditions, and overlapping bladder and/or bowel symptoms and conditions (see Table 1, p. 13). Chronic pelvic pain occurs disproportionately in adolescent and adult female survivors of interpersonal violence compared to women who do not have a history of interpersonal violence (As-Sanie et al., 2014; Ayorinde et al., 2015; Heim et al., 2000; Mark et al., 2008; Nelson et al., 2012; Poleshuck et al., 2005; Schrepf et al., 2018; Stein et al., 2017; Till et al., 2019).

Interpersonal violence occurs in multiple forms throughout life, in families and communities (Wilkins, 2014, 2018¹). It often begins in childhood, co-occurring with other adverse childhood events (ACEs). Individual behavior and characteristics that contribute to increased or decreased risk for violence victimization or perpetration are significantly shaped by experiencing facilitating and constraining factors at the community and interpersonal levels (Wilkins, 2018, p. S34). The prevalence of trauma experienced at the individual, interpersonal, and community levels are often a result of various and intersecting collective traumas, such as historical trauma (HT), racial trauma, oppressive trauma, and gender-based violence (GBV). The risk of violence disproportionately impacts populations who experience inequities caused by structural drivers and social determinants of health (SDOH), including race, socioeconomic status, gender, and geographic location (Armstead et al., 2021²). Additionally, intergenerational context influences violence within families and communities (Wilkins, 2014, 2018).

¹ Wilkins et al. (2014, 2018) are affiliated with the Division of Analysis, Research, and Practice Integration, National Center for Injury and Prevention at the CDC.

² Armstead, T is affiliated with the Division of Violence Prevention, Centers for Disease Control (CDC).

SUMMARY (Continued)

Despite the evidence of the dynamic, complex, multi-level social epidemiology of interpersonal violence and resulting adverse health outcomes, most health science studies view the adverse health outcome as an individual problem and examine abuse, sexual assault, or ACE score as a correlate or explanatory, without investigating the dynamic, complex, social processes that flow from the inequities rooted in structural drivers. In the *American Journal of Public Health (AJPH)*, Bowleg (2019) explains this is common research practice when following traditional biomedical and psychosocial theoretical frameworks. Bowleg (2019) identifies that

the predominance of these conceptualizations explains the relative void of theory, research, and interventions (not to mention education and training) focusing on the multi-level and macro-level (and modifiable) policies and practices that contribute to health inequities (p. 15).

In addition to the lack of ecological and SDOH theorizing and measurement, the studies examining CPP lack strength-based approaches. Instead, they focus on risk factors (e.g., abuse, pain catastrophizing, and depression). These approaches sharply contrast the disciplines and movements that incorporate anti-oppressive epistemologies and are leaders in the study of interpersonal violence and collective resistance, resilience, and healing, such as Black Feminism, critical feminism, and community psychology.

My dissertation took steps to narrow these gaps. My dissertation reimagines how interpersonal violence and the adverse health experience of CPP could be studied. I synthesized and critically engaged public health equity theory, anti-oppressive epistemologies, and practices—this work informed community-engaged research (CER) praxis about interpersonal violence, trauma, and adverse health outcomes. My dissertation is the first community health science contribution to transdisciplinary, insider knowledge of interpersonal violence and CPP research. Staying true to the aim of transdisciplinary

SUMMARY (Continued)

I integrated multiple ways of knowing into all stages of the research process (Defila and Di Giulio, 2015) as I approached the development of each chapter and my three aims.

In Chapter I, I described the purpose of my dissertation, the nature of my dissertation topic (including the use of CPP and interpersonal violence as a case example), the definitions of key constructs, and the epidemiology of CPP. In Chapter II, I reviewed and synthesized the following literature sets: (1) trauma and recovery; (2) interpersonal violence and health inequities; (3) chronic pelvic pain and related bowel and bladder dysfunction; (4) public health theory, including social epidemiological theory; and (5) participatory, qualitative, and mixed methods research (MMR). I interrogated the role of public health in promoting health equity as a process and goal, focusing on the health inequities influenced and perpetuated by interpersonal violence.

In Chapter III, I created and described my guiding theoretical framework: Ecosocial Context of Chronic Pelvic Pain among Survivors of Interpersonal Violence. I drew this conceptual framework from ecosocial theory (Krieger, 2005, 2008b, 2008a, 2011, 2014, 2016, 2019), the WHO's conceptual framework for structural and SDOH interventions (Solar and Irwin, 2010), and social-ecological perspectives of public health (Bronfenbrenner, 1977; Golden and Earp, 2012; Salli and Owen, 2015; Simons-Morton, 2013), including social-ecological models (SEMs) relating to interpersonal violence (Campbell et al., 2009; Carlson et al., 2019; Dahlberg and Krug, 2002; Danielson and Saxena, 2019). The theoretical framework of the Ecosocial Context of Chronic Pelvic Pain among Survivors of Interpersonal Violence aims to guide multi-level health promotion and planning. The framework focuses on health inequities expressed as patterns of health and disease in populations that many survivors of various forms of interpersonal violence experience throughout their lives. It allows for exploring embodiment as a construct and process concerning four related constructs.

SUMMARY (Continued)

I present my novel research associated with each aim in Chapter IV. Aim 1 is to critically engage with anti-oppressive epidemiological theory, praxis, and mixed methodologies to create an organizing research framework centered on the embodiment. I drew on the Ecosocial Context of Chronic Pelvic Pain in Survivors among Interpersonal Violence theoretical framework developed in Chapter III, Figure 2, to address the research problem of interpersonal violence and CPP from a community health perspective. Key constructs include intersectionality, embodiment, and pathways of embodiment. Other constructs included exposure, susceptibility, life course and resistance level, accountability, and agency. The construct of accountability and agency refers to the "institutions and persons responsible for generating or perpetuating health injustices and the public health researchers for the theories used to explain or ignore these injustices" (Krieger, 2019, p. 47). Therefore, I applied accountability and agency to problematize the role of the researcher when engaging with communities experiencing health and social inequities, as well as the processes and decisions associated with knowledge production and dissemination.

Next, I integrated methods of synthesis and analysis across five major literature areas: (1) trauma and recovery; (2) interpersonal violence occurring at multiple levels of the SEM, intervention, and prevention approaches; (3) chronic pelvic pain and related bowel and bladder dysfunction; (4) public health theory, including social epidemiological theory; and (5) participatory, qualitative, and MMR. I refined my literature topics and used qualitative analysis and interpretation techniques in the iterative literature review. In the methodological section, I created Figure 4 to map the reflexive, iterative, and synergistic process approach to the literature synthesis critique.

The Aim 1 results were the development of the Anti-Oppressive Praxis for Community Health Equity Trauma Research (CHET-Research) organizing framework presented in Figure 5. This framework links the research problem identification, knowledge production, relational processes,

SUMMARY (Continued)

conceptualization and measurement, analysis and interpretation, and meta-theoretical systems thinking. I presented an application of the CHET-Research organizing framework to study interpersonal violence and CPP in “Table XV. Whose and what experiences are not represented in the chronic pelvic pain literature? How a community health equity approach might address the challenges of representation”. The Anti-Oppressive Praxis for CHET-Research organizing research framework could serve as a launching point for future research on the intersections of community health and trauma to guide problem formation, development of study aims, rigorous qualitative and MMR methodologies, prioritization of relational praxis, and thinking through systems implications. This working framework is well-suited for scholars interested in exploring embodiment at the local and community level, as well as sensitive and stigmatized topics such as traumatic experiences, CPP, bladder, bowel, sexuality, mental health, and challenging chronic health outcomes.

In Aim 2, I applied the Anti-Oppressive Praxis for CHET-Research framework to develop a study protocol to study healing and resilience among survivors with CPP: *Anti-oppressive convergent phenomenological mixed methods research protocol: Healing and resilience experienced by survivors of interpersonal violence with a history of chronic pelvic pain in Chicago*. The purpose of my anti-oppressive, convergent, phenomenological MMR study is to explore the embodied healing and resilient experiences and meaning-making among ciswomen adult survivors of interpersonal violence with a history of CPP (ages 25-61 years; recruited from community-based and clinic settings that specialize in CPP) in Chicago. Greene and Caracelli (1997) characterize transformative MMR as value-based, action-oriented research. The study seeks insights into their ecosocial contexts. I intend to engage the enrolled women as “co-researcher participants.” Anti-oppressive scholars encourage qualitative research participants as active co-researchers because they co-construct their data with the rest of the research team (Strega and Brown, 2015). Saint Arnault (2017) recognizes that many women

SUMMARY (Continued)

are reluctant to share and emphasize that “research and intervention must ensure that the survivor can tell her story without revictimization while also aiming to restore personal mastery, empowerment, and self-understanding” (p. 2). The construction of the Anti-Opressive Praxis for CHET-Research integrates TIA and CER principles. CER methods realize the necessity of the insider community’s participation in data generation and intervention planning (Ryerson Espino and Trickett, 2008; Trickett, 2011; Trickett and Beehler, 2017).

The primary data collection proposed a series of three phenomenological semi-structured interviews: (1) focused life history, (2) details of the experience, and (3) reflection on meaning (Seidman, 2013). The interviews include body pain mapping (Saint Arnault and Shimabukuro, 2012; Berghmans and Bols, 2015; Brett-MacLean, 2009; MacGregor, 2009; Scorgie et al., 2017), social network “grand tour” mapping (Saint Arnault and Shimabukuro, 2011, p. 311), and community mapping (Parker, 2006; Scorgie et al., 2017; Stack-Cutler et al., 2017). I planned hermeneutic phenomenological analysis (see Table XXVII, p. 156) to address the protocol’s study Aim 1: Explore and describe the embodied nature, perceptions, meaning-making, and ecological context of healing and resilience across the co-researcher participants’ life course using hermeneutic phenomenological analysis (Vagle, 2016; van Manen, 2016). I described the use of directed content analysis (DCA) (Elo and Kyngä, 2008; Low et al., 2019) to develop a grounded theory (Charmaz, 2015; Glaser, 1978) to meet the protocol study Aim 2: Develop grounded theory, or emerging insights, to explore embodied or social-ecological conduits of patterns of interacting influencing embodied healing and resilience using DCA. I explained that the ecological perspective (Trickett, 1995; 2019) and intersectionality analysis (Hill-Collins and Bilge, 2016) are vital analytical tools to capture and explore the dynamic, complex embodied phenomena across social-ecological levels (individual, interpersonal, community, and society) and discern structural drivers and SDOHs. I described the MMR integration points needed to address the protocol Aim 3: To integrate

SUMMARY (Continued)

and describe the co-researcher participants' contextual and health-related characteristics encompassing intersectional socially constructed positions and identities. I presented Table XXI to define the strategies used to ensure data trustworthiness.

I addressed Aim 3: to engage in participatory explorative research with co-researchers, trauma-informed approaches (TIA) best practice literature, my archival field notes, and my reflexivity in informing guidelines for interacting with co-researchers and collaborators with trauma awareness in a research context. My methodological approach applied the Anti-Oppressive Praxis for CHET-Research organizing framework, and relational processes, toward this study's aim and methods. This exploratory, participatory action research study engaged co-researchers in virtual Co-Researcher Debriefs (CRD), an adapted focus group methodology approach. Thirteen co-researchers participated. I analyzed and interpreted the CRD data using an inductive approach to thematic analysis. I integrated multiple data triangulation using the TIA grey literature and archival field notes to inform my analysis. I focused on the research question: what are evidence-informed recommendations for TI interactions among co-researchers, participants, and collaborators in a research context?

Data triangulation illuminated the meta-theme: TI research confronts oppressive research structures and practices toward restorative processes and interactions. The following six themes emerged in the CRD analysis and interpretation: 1) The nature of oppressive, traditional research practices: "I am managing a level of oppression" and a victim of an oppressive system; 2) "strength-based" praxis: "everyone experiences trauma" and "no matter the focus of the research, there may be a possibility that someone will bring up a traumatic experience"; 3) the core feature of TI research is safety: "do not inadvertently do harm," and researchers proactively foster safe spaces and learn how to respond to varying degrees of distress; 4) planning TI research foundational training with experts from the community that the research project seeks to engage and academia; 5) how to engage with trauma

SUMMARY (Continued)

awareness? Embrace a learning and caring mindset with others and oneself; and 6) who and what to include in the research process? Preparing the grant application and study project protocol: considering human capital, budget, and timelines.

I. INTRODUCTION

A. Audiences

The primary audience of my dissertation is the members of my interdisciplinary committee. Each committee member has expertise in health, social inequity, and well-being in communities affected by systemic oppression.

My second audience is a pioneering transdisciplinary network of practitioners and scholars with expertise in bladder, bowel, and reproductive health, including chronic pelvic pain (CPP). Many of these people are caring, dedicated, curious, and intelligent. Furthermore, they have demonstrated the necessity of transdisciplinary scholarship and the inclusiveness of experiences, theoretical frameworks, conceptual models, methodologies, and multi-models of care. They share an appreciation for the complexity of the experience of CPP, including comorbid symptoms, conditions, and the various evolving mental health and quality-of-life experiences that people have throughout their lives. This network focuses on adolescent and adult females, non-binary, genderqueer, and transgender people—communities historically excluded from bladder health research. Many members of these communities continue to face judgment and stigma related to their CPP symptoms and their impact in clinical, family, and professional settings.

The third audience is fellow survivors of violence and their allies. We have tremendous expertise and courage to share our knowledge in the face of extreme adversity, usually at our expense and for the long-term collective benefit. A majority in our country, scientific communities, and populations across all sectors finally recognize our way of knowing as a legitimate stream of knowledge.

I encourage readers to contribute their research perspectives so that I can engage in the transdisciplinary development of my dissertation process, implications, and future research agenda-setting. I hope interested readers will continue to share their knowledge, experiences, and critiques with me and their social networks in the future. This work continues to evolve. Together, we are transforming

the trajectory of interpersonal violence and how it impacts (and interacts with) people, their families, communities, society, and future generations. We are changing the current reality by engaging in partnerships between survivors and researchers, and survivor-researchers to advance science and practice in health promotion, prevention, and implementation.

B. **Dissertation Purpose**

My dissertation synthesizes and critically engages public health equity theory and anti-oppressive epistemologies and practices toward informing community-engaged praxis. Using CPP as a case example, my dissertation aims to advance transdisciplinary research on interpersonal violence, trauma, women's health outcomes, healing, and resilience in an ecosocial context.

C. **Dissertation Structure and Aims**

1. **Chapter I: Introduction**

The introduction describes the purpose of my dissertation, the nature of my dissertation topic (including the use of CPP and interpersonal violence as a case example), the definitions of key constructs, and the epidemiology of CPP. The approach deviates from the traditional public health dissertation format to provide an epistemological and ontological voice needed to problematize a limitedly explored research problem that disproportionately affects groups who experience structural and social inequities.

2. **Chapter II: Themes, emerging intersections, gaps, and opportunities: Cross-cutting synthesis and critique of varied literature sets**

In this chapter, I have reviewed and synthesized the following literature: (1) trauma and recovery; (2) interpersonal violence and health inequities; (3) chronic pelvic pain and related bowel and bladder dysfunction; (4) public health theory, including social epidemiological theory; and (5) participatory, qualitative, and mixed methods research (MMR). I interrogate the role of public health in promoting health equity as a process and goal, focusing on the health inequities influenced and

perpetuated by interpersonal violence. I base this on the case example of the relationship between CPP and interpersonal violence. I use a combination of the following analytical and interpretive techniques: the “inventory of synthesis” methodology for transdisciplinary science (Defila and di Giulio, 2015, p. 128); discourse analysis to identify the epistemological and ontological foundations of the research problem (Bowleg, 2017; Willig, 2013); reflexivity (Hesse-Biber, 2010; Mauthner and Doucet, 2003; McHugh, 2014; Strega and Brown, 2015; Strickler, 2019); and concept analysis (Hupcey and Penrod, 2005). My insights are presented below and explained in detail in Chapter II.

a. **Emerging intersections between and within the literature**

The emerging intersections across and within the literature sets include (a) interpersonal violence and health inequities; (b) paradigms shifts in the CPP literature, from the biomedical model to the biopsychosocial model and toward a social epidemiological theory; (c) biopsychosocial literature in the CPP and trauma literature streams; and (d) mind-body awareness in the CPP and trauma literature streams. Next, I identify gaps and opportunities, which I summarize below.

b. **Research gaps and opportunities**

The health equity lens is absent from the CPP literature. Instead, it is primarily part of how public health studies have recently characterized, researched, and examined the health impacts of interpersonal violence. A significant contribution from public health social epidemiology is the World Health Organization’s (WHO) conceptual framework for action on the structural and social determinants of health inequities (SDOH) (Solar and Irwin, 2006) which identifies how social, economic, and political structures and processes influence socioeconomic position by dividing populations into social groups based on income, educational opportunity, gender identity, race/ethnicity, and sexual orientation and identity. The framework demonstrates how structural and social factors determine health.

I conclude Chapter II by identifying potential opportunities for health equity research to support health promotion and prevention, including (a) embodiment theories; (b) systems thinking; (c) ecological and community conceptualizations of resilience and healing; (d) trauma awareness and promotion of safe, trusting, and caring interactions; (e) transdisciplinary teams; and (f) positionality and self-reflexivity.

3. **Chapter III: Ecosocial context of chronic pelvic pain among survivors of interpersonal violence theoretical framework**

In this chapter, I create and describe my guiding theoretical framework. I drew this conceptual framework from ecosocial theory (Krieger, 2005, 2008b, 2008a, 2011, 2014, 2016, 2019), the WHO's conceptual framework for structural and SDOH interventions (Solar and Irwin, 2010), and social-ecological perspectives of public health (Bronfenbrenner, 1977; Golden and Earp, 2012; Salli and Owen, 2015; Simons-Morton, 2013), including social-ecological models (SEMs) relating to interpersonal violence (Campbell et al., 2009; Carlson et al., 2019; Dahlberg and Krug, 2002; Danielson and Saxena, 2019). The theoretical framework of the Ecosocial Context of Chronic Pelvic Pain among Survivors of Interpersonal Violence aims to guide multi-level health promotion and planning. The framework focuses on health inequities expressed as patterns of health and disease in populations that many survivors of various forms of interpersonal violence experience throughout their lives. It allows for exploring embodiment as a construct and process concerning four related constructs.

4. **Chapter IV: Aims**

This chapter consists of the research associated with the three aims.

a. **Aim 1: Crafting an anti-oppressive praxis for community health equity trauma research**

Aim 1 is to critically engage with anti-oppressive epidemiological theory, praxis, and mixed methodologies to create an organizing research framework centered on the embodiment.

This framework links research problem identification, knowledge production, relational processes, conceptualization and measurement, analysis and interpretation, and meta-theoretical systems thinking.

b. **Aim 2: Anti-oppressive convergent phenomenological mixed methods research protocol: Healing and resilience experienced by survivors of interpersonal violence with a history of chronic pelvic pain in Chicago**

Aim 2 develops a methodological protocol that addresses the second aim of my dissertation. Specifically, I apply the conceptual research framework Anti-Oppressive Praxis for Community Health Equity Trauma Research (CHET-Research) to develop and describe a novel MMR study protocol exploring healing and resilience among female interpersonal violence survivors with a CPP history in Chicago.

c. **Aim 3: Participatory development of research guidelines for interacting with co-researchers, participants, and collaborators with trauma awareness**

Aim 3 is to engage in participatory explorative research with co-researchers, trauma-informed approaches (TIA) best practice literature, my archival field notes, and my reflexivity in informing guidelines for interacting with co-researchers and collaborators with trauma awareness in a research context.

5. **Chapter V: Conclusion**

The conclusion discusses the implications of the research.

D. **Background: Dissertation Topic Foundations**

I define interpersonal violence and CPP and provide background on the epidemiology, pathophysiology, nature, and experience of CPP because these foundations are lacking in the public health literature and health promotion and prevention activities with survivors of interpersonal violence. Therefore, readers from public health disciplines, survivors of interpersonal violence, and

perhaps other fields unfamiliar with CPP may benefit from the following foundational grounding underpinning my case example.

1. **Defining interpersonal violence**

The WHO defines violence as “the intentional use of physical force or power threatened or actual, against one, another person, or against a group or community, that either result in or have a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation” (Dahlberg and Krug, 2002, p. 5). They conceptualize interpersonal violence as a broad term encompassing many forms and subtypes, subdivided into family and intimate partner violence (IPV) and community violence (Dahlberg and Krug, 2006; Krug et al., 2002). Interpersonal violence includes adverse childhood experiences (ACEs), childhood maltreatment (CM), childhood sexual assault (CSA), IPV (also known as domestic violence, DV), teen dating violence (TDV), and elder abuse (Dahlberg and Krug, 2002, p.6). Acquaintance and stranger violence consists of youth violence, assault by strangers, violence related to property crime, and violence in workplaces and other organizations (Dahlberg and Krug, 2002, p. 6). The above types of interpersonal violence include sexual assault (SA), sexual violence (SV), emotional, psychological, or verbal abuse, and physical violence. Chapter II provides definitions of the subtypes of interpersonal violence.

2. **Case example: Chronic pelvic pain and interpersonal violence**

As a case example, I examine CPP, its associated bowel and bladder dysfunction, and its relationship to interpersonal violence. These health outcomes occur disproportionately in adolescent and adult female survivors of interpersonal violence compared to women who do not have a history of interpersonal violence (As-Sanie et al., 2014; Ayorinde et al., 2015; Heim et al., 2000; Mark et al., 2008; Nelson et al., 2012; Poleshuck et al., 2005; Schrepf et al., 2018; Stein et al., 2017; Till et al., 2019). Abuse is considered an individual or interpersonal risk factor for the development and chronicity of CPP (As-Sanie et al., 2014; Ayorinde et al., 2015; Beesley et al., 2010; Chiu et al., 2017; Cichowski et al., 2013;

Drossman, 2011; Harris et al., 2018; Heim et al., 2000; Imhoff et al., 2012; Jundt et al., 2007; Kanuri et al., 2016; Korterink et al., 2015; Latthe et al., 2006; Leserman et al., 1996; Lesserman and Drossman, 2007; Liebermann et al., 2018; Mark et al., 2008; Meltzer-Brody et al., 2007; Nelson et al., 2012; Park et al., 2016; Poleshuck et al., 2005; Randolph and Reddy, 2006; Raphael and Windom, 2011; Schliep et al., 2016; Schrepf et al., 2018; Stein et al., 2017; Till et al., 2019; Volpe et al., 2020).

Despite the prevalence of these health morbidities in diverse communities with intersectional identities, they are understudied in public health. Considering that interpersonal violence is an SDOH whose causes are linked to structural mechanisms involving political, economic, and social forces, there is a case for critical social epidemiological public health theory and research that is currently lacking.

A multimodal, holistic approach is the gold standard for treating CPP. However, in clinic settings, the gold standard is inconsistently implemented (Le and Fitzgerald, 2017). The literature on group and community intervention suggests that interpersonal violence, trauma, and oppression are often not explicitly or directly addressed in the medical and clinical settings for women seeking treatment for CPP (Panisch and Tam, 2020). Further knowledge about bodily symptoms of dissociation relating to trauma is lacking in the CPP literature (Panisch, 2020). Many mental health professionals working with adolescents neglect their CPP and endometrial pain (Shah, 2020). I found no literature up to 2020 assessing mental health support for CPP in adults. Additionally, post-traumatic stress disorder (PTSD) diagnosis is often missed in primary care (Williams, 2017). There is a need for multi-level community health promotion, prevention, and systems-level implementation of evidence-based education about these critical intersections and approaches to addressing these dynamic, complex structural-social-and health phenomena across sectors.

Finally, the lived experiences of healing or recovery and resilience of people who have survived violence with a history of CPP remain undocumented. Experiential narratives and art (e.g., poetry, storytelling, mapping, illustrations, photovoice, video, performance, dance, and music) provide

contextual data that capture the interactions between experiences across time, space, activities, relationships, embodiment, and mood. However, the interactions between these data types are challenging to capture because survey data do not use the descriptive and local language and imagery necessary to understand the social-ecological (and individual) changes in complex embodied phenomena over time, cultural, and linguistic relevance. Limitations of survey data with people with CPP who experience interpersonal violence include selective and temporal memory and the nature of traumatic memory.

a. **Chronic pelvic pain prevalence rates**

Chronic pelvic pain affects approximately 15% of adult women in the United States (U.S.) and 5.7%–26.6% worldwide (Ahangari, 2014; Latthe et al., 2006). The global prevalence of CPP in adult males is 2%–16% (Krieger et al., 1999; Naliboff et al., 2015; Schaeffer, 2008). Most CPP research involves paradigmatic classifications of socially constructed gender identities, ciswomen, and cismen. It is unclear if epidemiological studies are limited to cisgender women or if they also unknowingly include people who identify as gender nonconforming, queer, trans men, or trans women (Hardacker et al., 2019; Stein et al., 2017). Chronic abdominal pain, formally known as “recurrent abdominal pain (RAP),” is widespread in childhood (Stein et al., 2017). Prevalence rates range from 0.3–19% among school-aged children in the U.S. and Europe (Stein et al., 2017, p. 1). Measurements that address differences between social groups are minimal. Ayorinde et al. (2015) noted that there is “no clear pattern of association of CPP with socio-demographic factors” (p. 858).

b. **Chronic pelvic pain definition and overview**

Pelvic pain (PP) is pain focused on the pelvic area, or “the anterior abdominal wall at or below the umbilicus (i.e., belly button), the lumbosacral back, or the buttocks” (Le and Fitzgerald, 2017, p. 449). Acute PP suddenly arises and requires immediate diagnosis and treatment. Chronic pelvic pain is separate from acute pelvic pain and requires different treatments.

The most common definition of CPP across all medical specialties is persistent pain in the pelvis lasting at least six months. It may or may not be associated with menstruation (As-Sanie, Kim, Schmidt-Wilcke, et al., 2016; Cheong et al., 2014). Le and Fitzgerald (2017), expert physicians and a physiatrist caring for patients with CPP, characterize CPP as “arbitrarily defined as lasting for more than six months and frequently carries significant physical, functional, and psychological burdens that negatively affect the quality of life” and state that management of CPP “can be very challenging” and is “drastically different from that of acute PP” (p. 450). The American College of American College of Obstetricians and Gynecologists and reVitalize (2018) define³ CPP as

pain symptoms perceived to originate from pelvic organs/structures typically lasting more than six months. It is often associated with negative cognitive, behavioral, sexual, and emotional consequences and symptoms suggestive of the lower urinary tract, sexual, bowel, pelvic floor, myofascial, or gynecological dysfunction. Cyclical pelvic pain is considered a form of CPP if it has significant cognitive, behavioral, sexual, and emotional consequences (p. 7).

i. **Centralized pain**

According to Asiri et al. (2019), “the processing of pain, as a complex cognitive, sensory experience, engages widespread brain regions and neural networks” (p. 233). Emerging evidence shows that the central nervous system (CNS) plays a significant role in developing and perpetuating CPP and other chronic pain (CP) conditions. CPP experts Tu and As-Sanie (2019) state that while CPP can be a symptom caused by one or more different conditions, it is often “a chronic condition related to how the CNS processes threat perception,” a process referred to as “centralized

³ The reVITALize data definitions for gynecology are formally endorsed by the following organizations: The American Academy of Family Physicians; The American College of Obstetricians and Gynecologists; The American College of Nurse-Midwives; The American Society for Colposcopy and Cervical Pathology; The American Society for Reproductive Medicine; The American Urogynecologic Society; The Association of Women’s Health, Obstetric and Neonatal Nurses; The National Association of Nurse Practitioners in Women’s Health; The North American Menopause Society; RESOLVE: The National Infertility Association; The Society of Gynecologic Oncology; The Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction.

pain” (p. 1). Schrepf et al. (2018) explain that the concept of “centralized pain” comprises the theoretical and empirical bases for the CNS’s contribution to CP conditions (p. 9). The notion is that “multiple repetitions of lower-level stimuli may, over time, result in a more severe central perception of pain” (Steege and Siedhoff, 2014, p. 617). Furthermore, when centralized pain happens, the CNS overacts to various triggers, and the person experiences more pain than expected (Schrepf et al., 2018). Clinically, this process is often referred to as “hyperalgesia” and is related to “allodynia,” which refers to a pain experience resulting from what typically would be a non-noxious stimulus (As-Sanie, Kim, Schmidt-Wilcke, et al., 2016).

Factoring in genetic and social factors that contribute to pain amplification, this centralized hypersensitivity helps us understand how multiple organ systems can be recruited into the CPP syndrome as nociceptive stimuli from various anatomic sites (such as the bowel, bladder, muscle, and uterus) can be processed and experienced as pain at a lower threshold in the patient with the centralized pain disorder (Steege and Siedhoff, 2014, p. 617). Centralized pain may also encompass the symptom feature of chronic overlapping pain conditions (COPCs) with the most significant evidence of pain centralization, including widespread pain, fatigue, negative affect, non-restorative sleep, and cognitive dysfunction (Schrepf et al., 2018). Chronic overlapping pain conditions are discussed further in Section D below. The concept of neuroplasticity signals opportunities for intervention with the appropriate treatment, time, and teaching (Steege and Siedhoff, 2014).

ii. **Chronic pelvic pain symptoms are multifactorial**

Chronic pelvic pain is often associated with endometriosis, interstitial cystitis/bladder pain syndrome (IC/BPS), or both. However, it also shares the multifactorial aspects of other CP conditions (Arnold et al., 2021). A CPP conceptualization is a constellation of different symptoms attributed to overlapping conditions, including but not limited to endometriosis, pelvic

myofascial pain, vulvodynia, interstitial cystitis/bladder pain syndrome (IC/BPS), irritable bowel syndrome-constipation (IBS-C), and chronic constipation (CC) (Kumar and Scott, 2020; Till et al., 2019b).

The American College of Obstetricians and Gynecologists (2020) lists frequent contributors to CPP unrelated to the female reproductive system, including IC/BPS, IBS, pelvic floor muscle (PFM) tenderness, and depression. Many experts and researchers agree that the symptoms of CPP are multifactorial (Hoffman, 2011; Le and Fitzgerald, 2017). Clinicians and researchers associate CPP with more than 70 diagnoses. Most patients simultaneously suffer from bowel, bladder, and sexual dysfunction (Le and Fitzgerald, 2017).

Table I identifies the body systems and related symptoms and conditions/diagnoses that cause or often overlap with the CPP experience. I adapted the table from Le and Fitzgerald (2017, p. 451). I cross-referenced this table with the American College of Obstetricians and Gynecologists (2020), “Box 1: Common Conditions Associated with CPP” (p. e99). I added definitions to the symptoms or conditions, estimated prevalence rates, and familiar clinical specialists involved with patients seeking help for these conditions. Table I illustrates the complex nature of CPP symptoms, the anatomical and physiological systems that can be affected, and identifies clinical stakeholders. In addition to the specialists listed, physicians and nurses in family and internal medicine are often involved in caring for patients with CPP. Although categorized by different body systems, the CPP experience of phenomena often interacts dynamically within the broader social-epidemiological context.

The lengthy Table I represents the complexity of treating CPP for people with it and providers. Patients tend to focus on visceral etiologies when it is likely neuromuscular issues, such as myofascial points, which may be more common but go overlooked. This holistic approach is necessary but rare for any phenomenon. Although the gold standard is a multimodal care team approach, collaboration among these practitioners is rare (Le and Fitzgerald, 2017), and misdiagnosis is common (Gyang et al., 2013). Arnold et al. (2021) published an article in the American Family Physician to describe ACOG’s practice

guidelines that focus on neuromuscular evaluation and intervention with pelvic floor physical therapy and the potential of trigger point injections. They highlight that surgical interventions do not appear to offer benefits.

a) **Neuromusculoskeletal factors**

Neuromusculoskeletal factors, such as myofascial trigger points, are often overlooked yet are common in CPP (Arnold et al., 2021). Pelvic floor muscle dysfunction and postural changes are prevalent in up to 75% of women with CPP (Loving et al., 2014). For example, PFM overactivity is a common challenge; typical characteristics share hypertonicity (increasing resting tone), decreased relaxation ability, and increased pain sensitivity and tenderness. There is evidence that PFM dysfunction, particularly PFM overactivity, is associated with CPP (Engeler et al., 2013). In addition, because neuromusculoskeletal factors are often underdiagnosed, treatment may be prolonged (American College of Obstetricians and Gynecologists, 2020; Gyang et al., 2013). I reprinted Le and Fitzgerald's (2017) table, "Neuromuscular causes of chronic pelvic pain," in Table II (p. 452).

b) **Neurobiological comorbidities**

All types of pain occur within the context of other co-occurring neurobiological processes that can influence symptom severity and duration. Till et al. (2019) review, they describe that while a temporal relationship is not clear, the relationship between CP syndromes and various comorbid psychological disorders is "reciprocal and synergistic" (p. 16). With these bidirectional relationships in generating and perpetuating pain cycles, patients with CP and neurobiological comorbidities experience a lower quality of life and report more depression and higher healthcare costs than patients without neurobiological comorbidities.

TABLE I.
BODY SYSTEMS, SYMPTOMS, CONDITIONS/DIAGNOSES, AND EXPERIENCES THAT ARE COMMONLY ASSOCIATED WITH CHRONIC PELVIC PAIN AMONG
FEMALES: DEFINITIONS, PREVALENCE DATA ESTIMATES, AND SPECIALISTS

May Cause or Co-Exist with CPP Symptoms	Definitions and Prevalence Data Estimates (if available and reliable)
	<p style="text-align: center;">VISCERAL</p> <p style="text-align: center;">“Visceral pain results from stimulation of nociceptors of organs” (American College of Obstetricians and Gynecologists, 2020, p. e99)</p>
	<u>UROLOGIC</u>
Urologic pelvic pain syndromes (UPPS)	<ul style="list-style-type: none"> • “Painful symptoms in the bladder or pelvic region (e.g., pain as the bladder fills) and urinary symptoms relating to a frequent or urgent need to urinate and/or getting up to urinate at night (e.g., needing to urinate less than 2hr after last urination)” (Schrepf et al., 2018, p. 866). • Occurs in women and men. • Chronic pelvic pain syndrome (CP-CPPS) is diagnosed exclusively in men (Schrepf et al., 2018).
Interstitial cystitis/painful bladder syndrome (IC/PBS)	<ul style="list-style-type: none"> • Categorized as a UPPS (Schrepf et al., 2018). • Occurs primarily in women (Schrepf et al., 2018). • “Unpleasant sensation (pain, pressure, discomfort) perceived to be related to the urinary bladder, associated with LUTS of more than six weeks’ duration, in the absence of infection of other identifiable causes”(Hanno and Dmochowski, 2009, p. 274). • “Persistent bladder or pelvic pain and urologic symptoms, such as urinary urgency and frequency” (Li et al., 2020, p. 1945) • “A chronic disabling syndrome consisting of suprapubic pressure or pain accompanied by severe urinary frequency and/or urgency” without an identifiable cause. Typically, suprapubic discomfort worsens as the bladder fills and is relieved by urination” (Clemens et al., 2005, p. 576). • 2.7%-6.53% prevalence estimates or 3.3-7.9 million adult women in the U.S. (Berry et al., 2011).
	<i>Specialists: urogynecologists, urologists</i>
	<u>GYNECOLOGIC</u>
Adenomyosis	<ul style="list-style-type: none"> • Endometrial tissue grows inside the uterine walls (endometrial tissue normally lines the uterus). • Intermittent CPP may result from CP occurring from dysmenorrhea, which is pain before menstruation (Green et al., 2010).
Chronic changes due to pelvic inflammatory disease (PID)	<ul style="list-style-type: none"> • 18-33% of women report CPP, one of several long-term complications of PID. The pain is typically associated with inflammation, scarring, and adhesions (Jennings and Krywko, 2023, p. 1). • It is “inflammation of the upper genital tract due to an infection. [It] affects the uterus, fallopian tubes, and/or ovaries. It is typically ascending from the lower genital tract” (Jennings and Krywko, 2023, p. 1).

TABLE I.
BODY SYSTEMS, SYMPTOMS, CONDITIONS/DIAGNOSES, AND EXPERIENCES THAT ARE COMMONLY ASSOCIATED WITH CHRONIC
PELVIC PAIN AMONG FEMALES: DEFINITIONS, PREVALENCE DATA ESTIMATES, AND SPECIALISTS (Continued)

Cause or Co-Exist with CPP Symptoms	Definitions and Prevalence Data Estimates (if available and reliable)
	<p style="text-align: center;">VISCERAL</p> <p>“Visceral pain results from stimulation of nociceptors of organs” (American College of Obstetricians and Gynecologists, 2020, p. e99)</p>
Endometriosis	<ul style="list-style-type: none"> • The “presence of endometrium-like tissue outside the uterus” (Zondervan et al., 2018, p. 9). • The above “definition does not encompass the complex, symptomatic, pathobiology, and multisystemic nature of the disorder” (Zondervan et al., 2020, p. 1244). • The endometrium is the tissue lining inside the uterus. When these cells grow, they cause inflammation, leading to symptoms. Common locations where endometriosis occurs include the ovaries, fallopian tubes, the bowel (large intestine), and areas of the uterus: front, back, and sides (Tu and As-Sanie, 2019). • 10% of premenopausal women (Shafrir et al., 2018). • 70% of women with CPP are diagnosed with endometriosis (Carter, 1994). • Many women with endometriosis also have myofascial pelvic floor pain (Aredo et al., 2017). • The estimated prevalence of laparoscopically confirmed endometriosis in adolescent females ranges from 19–73% (American College of Obstetricians and Gynecologists, 2005; Kontoravdis et al., 1996; Vercellini et al., 1990).
Pelvic congestion syndrome (PCS)	<ul style="list-style-type: none"> • “Chronic pelvic pain arises from dilating and refluxing pelvic veins” (Champaneria et al., 2016, p. v). • There is a lack of consensus on the definition, and diagnostic criteria are variable (American College of Obstetricians and Gynecologists, 2020; Champaneria et al., 2016).
Uterine fibroids	<ul style="list-style-type: none"> • Benign tumors of the uterus or leiomyomas (Giuliani et al., 2020). • Pelvic pain or fertility problems are present in some women with uterine fibroids (Laughlin-Tommaso et al., 2020). • Prevalence is underestimated (Longo and Bulun, 2013; Marsh et al., 2013). • Approximately 70% of women have had fibroids (Stewart et al., 2017). • In the U.S., fibroids are detected by ultrasound in approximately 80% of Black women and 70% of White women by age 50 (Baird et al., 2003). There are limited data on other racial and ethnic groups.
Vulvodynia	<ul style="list-style-type: none"> • Persistent or recurrent vulvar pain without infectious or local causes (American College of Obstetricians and Gynecologists, 2016). Has an 8.3% prevalence rate (Reed et al., 2012).

TABLE I.
BODY SYSTEMS, SYMPTOMS, CONDITIONS/DIAGNOSES, AND EXPERIENCES THAT ARE COMMONLY ASSOCIATED WITH CHRONIC PELVIC PAIN AMONG FEMALES: DEFINITIONS, PREVALENCE DATA ESTIMATES, AND SPECIALISTS (Continued)

May Cause CPP or Co-Exist	Definitions and Prevalence Data Estimates (if available and reliable)
GASTROINTESTINAL	
Chronic constipation (CC)	<ul style="list-style-type: none"> • Lasting at least one-month, unsatisfactory defecation from infrequent stools, difficult stool passage, or both (Brandt et al., 2005) • It is a term that includes a spectrum of symptoms lasting at least one month, linked to a person's dissatisfaction with their ability to evacuate (Brandt et al., 2005; Lunniss et al., 2009), that include hard stools, excessive straining, infrequent bowel movements, bloating, and abdominal pain (Camilleri et al., 2017). • The global prevalence is approximately 14%; it increases with age (Suarez and Ford, 2011). • Twice as common in women than in men (Suarez and Ford, 2011).
Diverticulitis	<ul style="list-style-type: none"> • "Colonic diverticulosis refers to the presence of 'pockets' of mucosa through defects in the colonic muscular wall. These defects are typically in areas of weakness where vasa recta vessels enter through the colonic musculature" (Hong et al., 2015). • Diverticular can occur anywhere in the colon but is commonly found in the sigmoid colon (Hong et al., 2015). • Frequently co-existent with IBS (Frattini and Longo, 2006; Hong et al., 2015). • Chronic diverticulitis is "persistent pain in the absence of inflammation" (Frattini and Longo, p. S145).
Irritable bowel syndrome (IBS-C)	<ul style="list-style-type: none"> • "Gastrointestinal disorder characterized by chronic abdominal pain and altered bowel habits—diarrhea, constipation, or alternating episodes of both—in the absence of clear anatomical or physiologic abnormalities" (Kolacz and Porges, 2018, p. 2). • "Recurrent abdominal pain, on average, at least one day per week in the three months before diagnosis that is associated with two more of the following: (a) relation to defecation, (b) association with change in the frequency of stool, (c) association with a change in the form (appearance) of stool (Rome IV criteria)" (Kolacz and Porges, 2018, p. 2). • 4.3–21.8%, depending on the diagnostic procedures used from prevalence estimates from epidemiological studies in the U.S., Europe, Australia, and New Zealand (Drossman et al., 2002).
<i>Specialists: gastroenterologists</i>	
NEUROMUSCULOSKELETAL	
Pelvic floor dysfunction (PFD)	<ul style="list-style-type: none"> • Posterior pelvic floor difficulties are typically symptom-based, related to structural, neuromuscular, and functional problems that involve PP, CPP, pain with urination, difficulty urinating, constipation, pain with intercourse, frequent urination, prolapse, pelvic pressure, and fecal incontinence (Davis and Kumar, 2005). • 75% of women with CPP (estimates vary) experience PFD (De Souza Montenegro et al., 2010; Loving et al., 2014).
Abdominal myofascial pain	<ul style="list-style-type: none"> • Develops due to trigger points in the abdominal musculature (Niraj, 2018, p. 2256). • Trigger points are spots of neurovascular entrapment that are "tender and hyperirritable"(Niraj, 2018, p. 2256). • 14%-23% of women with CPP have myofascial pain (Tu et al., 2005).
Fibromyalgia (FM)	<ul style="list-style-type: none"> • Affects connective tissue structures, including muscles, ligaments, and tendons (Tu and As-Sanie, 2019).
<i>Specialists: physiatrists, pelvic floor physical therapists (PTs), neurologists, and urogynecologists. Patients seeking care for FM may also interface with rheumatologists.</i>	

TABLE I.
BODY SYSTEMS, SYMPTOMS, CONDITIONS/DIAGNOSES, AND EXPERIENCES THAT ARE COMMONLY ASSOCIATED WITH CHRONIC PELVIC PAIN AMONG FEMALES: DEFINITIONS, PREVALENCE DATA ESTIMATES, AND SPECIALISTS (Continued)

May Cause CPP or Co-Exist	Definitions and Prevalence Data Estimates (if available and reliable)
NEUROBIOLOGICAL	
Anxiety/ generalized anxiety disorder (GAD)	<ul style="list-style-type: none"> • “Pervasive or excessive worry interferes with daily activities, sleep, and concentration. It is frequently associated with muscle tension or fatigue” (Till et al., 2019, p. 3). • 39–73% prevalence of anxiety in patients with CPP (Bryant et al., 2016; Miller-Matero et al., 2016; Romão et al., 2009)
Depression/major depressive disorder (MDD)	<ul style="list-style-type: none"> • Persistent feelings of sadness, loss of interest in previously enjoyed activities (anhedonia), and issues with decreased appetite, energy, and sleep” (Till et al., 2019, p.2). • Depression prevalence rates are 26–52% among patients with CPP (Bryant et al., 2016; Lorençatto et al., 2006; Miller-Matero et al., 2016; Romão et al., 2009). • 65% of patients with depression report some CP symptoms (Bair et al., 2003).
Pain catastrophizing	<ul style="list-style-type: none"> • “A maladaptive cognitive and emotional coping response, in which patients tend to ruminate on and amplify pain symptoms and display feelings of helplessness and pessimism” (Till et al., 2019, p. 3). • Appraisal of one’s pain as overwhelmingly bad and the extent to which a person believes this will lead to harmful consequences (Rosenstiel and Keefe, 1983). • In one study, 42% of CPP patients showed moderate to severe catastrophizing (Martin et al., 2011; S. Till et al., 2019).
Post-traumatic stress disorder (PTSD)	<ul style="list-style-type: none"> • Consists of four clusters of symptoms: (1) intrusive and recurrent memories, (2) avoidance of related stimuli, (3) numbing and/or unfavorable changes in mood or cognitions, and (4) change in physiological reactivity and arousal (Blizzard et al., 2009). • 8–10% estimated lifetime prevalence of PTSD in the general population (McFarlane, 2010). • Women are more likely to suffer from PTSD than men (Blizzard et al., 2009). • May not manifest immediately after the trauma (McFarlane, 2010).
<i>Specialists: psychologists, psychiatrists, physiatrists</i>	
Interpersonal violence is a social determinant of health and interacts within the Social-Ecological System	
<u>Interpersonal violence</u> selected key measures from the National Intimate Partner and Sexual Violence Survey (NISVS, 2015 in Smith et al., 2018).	
Reported contact sexual violence (SV), physical violence, and/or stalking by intimate partner violence (IPV) and reported an IPV-related impact during their lifetime (Smith et al., 2018, p. 8).	36.4% (43.6 million) or 1 in 3 females across their lifetime, compared to 10.9% (12.1 million) or 1 in 10 males across their lifetime (Smith et al., 2018, pp. 8-9).
“Victims of contact SV, physical violence, and/or stalking by an intimate partner in their lifetime first experienced these or other forms of violence by that partner before age 18” (Smith et al., 2018, p. 8).	26% of females (11.3 million) compared to 14.6 % of males (5.4 million) (Smith et al., 2018, pp. 8-9).
Experienced some form of sexual violence contact in their lifetime. (Smith et al., 2018, p. 2).	43.6% of women (approximately 52.2 million) compared to 24.8% of men (27.6 million) (Smith et al., 2018, pp. 2-3).
<i>Specialists: psychologists, psychiatrists, social workers</i>	

TABLE II.
NEUROMUSCULAR CAUSES OF CHRONIC PELVIC PAIN

Category	Diagnoses
Muscular/fascia	<ul style="list-style-type: none"> • Pelvic floor myofascial pain/levator ani syndrome/tension myalgia • Myofascial pain syndromes of associated extrinsic muscles (iliopsoas, adductor, piriformis) • Dyssynergia of the PFM • Vaginismus/dyspareunia • Iatrogenic (synthetic mesh infection, exposure through vaginal mucosa, contraction, and band formation)
Skeletal/joint	<ul style="list-style-type: none"> • Pelvic insufficiency/stress fracture • Sacroiliac joint dysfunction/servilities • Pelvic obliquity or derangement, pelvic asymmetry • Pubic symphysis/osteitis pubis/pubis symphysis separation • Coccydynia • Lumbar degenerative disc disease/spondylosis or listhesis (with referral to posterior pelvis [L4-L5-S1]) • Hip osteoarthritis/hip fracture/acetabular labral tears/chondrosis/developmental hip dysplasia/femoral acetabular impingement/avascular necrosis of the femoral head • Bony metastasis
Neurologic	<ul style="list-style-type: none"> • Radiculopathy • Plexopathy • Peripheral neuropathy – pudendal neuropathy • Sacral postherpetic neuralgia
Viscerosomatic (presumed)	<ul style="list-style-type: none"> • Endometriosis • IBS • IC/BPS • Dysmenorrhea • Chronic prostatitis (in men)

Reprinted. (Le and Fitzgerald, 2017, p. 452)

Chronic pelvic pain in adolescents and adult women is often comorbid with depression, anxiety, and post-traumatic stress disorder (PTSD) (As-Sanie et al., 2014; Bryant et al., 2016; Meira Siqueira-Campos et al., 2019; Pierce and Christianson, 2015; Romão et al., 2009; Seng et al., 2005; Stein et al., 2017; S. Till et al., 2019). Patients with CPP who have co-occurring depression or anxiety tend to experience more severe pain than CPP patients without depression (Romão et al., 2009; Yosef et al., 2016). Other symptoms and conditions that have demonstrated overlap with CPP, including stress and substance use disorders (SUD) (American College of Obstetricians and Gynecologists, 2020; Le and Fitzgerald, 2017), also have increased comorbidity with depression and other CP conditions (Zambelli et al., 2022), further demonstrating the complex interactions of processes within the CNS contributing to pain centralization.

Pain catastrophizing is a maladaptive cognitive coping response to pain rather than a psychological disorder. It is strongly associated with pain severity (Yosef et al., 2016) and poorer health-related quality of life in CPP patients (McPeak et al., 2018). Evidence shows that CPP patients with high levels of catastrophizing do not respond to a range of treatments compared to patients with low levels of catastrophizing (Till et al., 2019), providing an example of how other co-occurring neurobiological factors contribute to chronic pain experience and complicate its treatment.

c) **Chronic overlapping pain conditions**

Approximately one in three people in the U.S. suffer from CP. The U.S. Congress and the National Institutes of Health (NIH) recently coined “COPC” in their Chronic Pain Research Alliance (2015) grey paper, *Impact of Chronic Overlapping Pain Conditions on Public Health and the Urgent Need for Safe Effective Treatment: 2015 Analysis and Policy Recommendations*. The researchers identified ten common pain conditions that frequently co-occur and predominantly affect women and families listed in Table III (Veasley et al., 2015).

People who frequently report a history of CPP, FM, and migraine are more likely to report depression, anxiety, or panic disorder, with decreased quality of life scores (Hu et al., 2007; Lai et al., 2019; Nicol et al., 2016). More than 50% of women in a tertiary outpatient clinic for CPP had moderate to severe anxiety, and more than 25% had moderate to severe depression (Bryant et al., 2016). The increased prevalence of anxiety and depression is also well-documented in other CP conditions (Bair et al., 2003; Till et al., 2019). Evidence suggests similar disease mechanisms underlie these disorders, most notably the immune and endocrine systems (Veasley et al., 2015). Functional, structural, and chemical neuroimaging studies show abnormalities in the brains of people with COPCs (Kutch et al., 2017; Schrepf et al., 2016; Seminowicz and Davis, 2006).

TABLE III.
TEN CHRONIC OVERLAPPING PAIN CONDITIONS —FREQUENTLY CO-OCCUR
AND PREDOMINANTLY AFFECT FEMALES

1.	Temporomandibular Disorder (TMD)
2.	Fibromyalgia (FM)
3.	Chronic fatigue syndrome (CFS)
4.	Chronic tension-type headache
5.	Migraine headache
6.	Chronic low back pain
7.	Irritable Bowel Syndrome (IBS)
8.	Vulvodynia
9.	Endometriosis
10.	IC/PBS

(Veasley et al., 2015)

A recent review examined CPP in the context of COPC in women (Kumar and Scott, 2020). The authors discussed that previous CPP research occurred in the context of separate medical subspecialties, leaving overlapping underlying biopsychosocial mechanisms undetected. Kumar and Scott (2020) emphasize the multifactorial nature of CPP, with recent research identifying similar central mechanisms. The authors state, “A link has been established between pelvic and extra-pelvic chronic pain conditions under the emerging construct of COPCs, with the degree of over-correlating with increased severity and worse outcomes” (Kumar and Scott, 2020, p. 207). They also recommend that future research explore the central mechanisms of CPP and COPC to learn how to address them with a multimodal, holistic approach.

d) **Chronic pelvic pain experiences**

Clinicians often consider CPP one of the most challenging problems to treat clinically (Schliep, 2018). Lived experience research, particularly in the phenomenological tradition, has enhanced my understanding of how adolescents and adult women experience CPP. Toye et al. 's (2014) qualitative meta-ethnography of CPP literature illustrates the benefits of using qualitative methods. The authors created a conceptual model based on 32 qualitative studies of the experience of CPP or endometriosis pain (p. 271). I compiled their results in Table IV. These findings provide a contextual and nuanced understanding of the experience of women living with CPP. However, the studies do not distinguish between the experiences of women living with CPP without experiences of interpersonal violence compared to women living with CPP with experiences of interpersonal violence. Therefore, it is difficult to understand the CPP experience within experiences of interpersonal violence.

In the “Dissertation Structure” section above, I introduced the structural drivers of health inequities and SDOHs. For instance, women with CPP frequently report missed work and lower productivity, compromising living and working conditions, which can jeopardize employment and income, and social isolation (Denny and Mann, 2007; Slade, 2006). They often experience impacts on

their relationships with intimate partners and friendships (Fourquet et al., 2011; Moradi et al., 2014; Soliman et al., 2017).

TABLE IV.
WOMEN'S EXPERIENCES OF CHRONIC PELVIC PAIN –
FINDINGS FROM META-ETHNOGRAPHY OF QUALITATIVE RESEARCH FINDINGS

<ul style="list-style-type: none"> ● Relentless and overwhelming pain ● Threat to self ● Unpredictability ● Struggle to construct pain as normal or pathological. ● A culture of secrecy ● Validation by diagnosis ● Ambiguous experience with healthcare ● Elevation of experiential knowledge and embodiment of knowledge through a community

(Toye et al., 2014, p. 271)

Missmer et al. (2021) conducted the first systematic review using a life course approach to examine the known effects of endometriosis on life-domain satisfaction, which may impact health and well-being. The authors identified potential factors mediating the impact of endometriosis on the life course, which they considered at the individual level. These include age at diagnosis of symptoms; delay in diagnosis; social/family/spouse support; psychological considerations (e.g., abuse/early traumatic exposures, stress, anxiety, depression); severity, frequency, and predictability of pain; opioid use; infertility; pregnancy/successful live birth; comorbidities and their symptoms; response (or non-response) to treatment; the number of surgeries; geographic location; financial status; access to health care; hysterectomy; menopause; patient resilience; complementary and alternative medicine coping mechanisms, including mindfulness training or other mind-body interventions; and predisposition to pain/CP syndromes (p. 20).

In the above literature discussion, I demonstrate integrating CPP clinical research with a community health science and broader public health lens. Together, these studies show interactions with social-ecological levels, structural drivers, and SDOHs in the experience of CPP and offer insights into interpersonal, institutional, and societal norms and cultures. As Missmer et al. (2021) suggested, these data can facilitate intervention and prevention planning. As the literature described, the more recent discoveries of the crucial roles of the CNS and the understudied neuromuscular systems in the CPP and COPC experiences build a solid case for a transdisciplinary and equity lens. Chapter II discusses how traumatic and toxic stress impacts the CNS and PFM. A broad takeaway is, interestingly, people who experience both CPP and COPC and traumatic and toxic stress experience biological changes via their CNS and, in turn, can perpetuate CPP and mental health states.

E. **Statement of The Problem**

1. **Problem definition existing in the current literature**

The public health literature lacks research investigating the relationship between interpersonal violence and CPP. In contrast, the clinical CPP literature essentially portrays the problem of abuse as an individual or interpersonal risk factor for or a significant correlate to CPP (As-Sanie et al., 2014; Ayorinde et al., 2015; Beesley et al., 2010; Chiu et al., 2017; Cichowski et al., 2013; Drossman, 2011; Harris et al., 2018; Heim et al., 2000; Imhoff et al., 2012; Jundt et al., 2007; Kanuri et al., 2016; Korterink et al., 2015; Latthe et al., 2006; Leserman et al., 1996; Lesserman and Drossman, 2007; Liebermann et al., 2018; Mark et al., 2008; Meltzer-Brody et al., 2007; Nelson et al., 2012; Park et al., 2016; Poleshuck et al., 2005; Randolph and Reddy, 2006; Raphael and Windom, 2011; Schliep et al., 2016; Schrepf et al., 2018; Stein et al., 2017; Till et al., 2019; Volpe et al., 2020).

Abuse is an element that may be present in various forms of interpersonal violence. The literature examining differences between different types of abuse produced mixed results, although some researchers found the most significant correlations among adults who experienced early

childhood abuse, particularly sexual abuse (SA), emotional abuse, and cumulative abuse exposure across their lifetime (Harris et al., 2018; Raphael and Widom, 2011; Rosenblat et al., 2020; Schrepf et al., 2018). Studies in the past seven years indicate that pain-catastrophizing mediates abuse and severity and chronicity of CPP (McPeak et al., 2018; Till et al., 2019; Yosef et al., 2016).

While the clinical CPP problem identification has advanced the scope of the health needs of survivors of violence and the epidemiology of CPP, it provides a minimal characterization of the phenomenon of interpersonal violence and CPP, causing implications for treatment, prevention, and health promotion. Chapter II more fully critiques this literature and explores and builds on how to define the problem using a transdisciplinary lens grounded in community health science equity framing presented in Chapter I.

2. **Redefining the research problem**

The three primary research problems are 1) a lack of public health literature contribution to CPP, in general, and more specifically, its significant relationship with interpersonal violence, 2) the emphasis examining individual factors of CPP, specifically abuse, depression, PTSD, anxiety, and pain catastrophizing, and 3) the epistemologies and ontologies lack strength-based approaches. Chapter II will discuss and address each of these problems.

In Chapter III, I present an Ecosocial Context of Interpersonal Violence and CPP, an adaptation of Krieger's ecosocial theory (Krieger, 2019) that lays out a theoretical framework to address these gaps.

F. **Significance**

Transdisciplinary and interdisciplinary research has the potential for research and implementation science to integrate a community health equity science approach. Community health equity science collaborates with communities and academic teams to pursue a relationship, CPP, bladder, bowel, and mental health promotion and intervention across the SEM. For example, my

dissertation seeks to reimagine how interpersonal violence and the adverse health experience of CPP could be studied.

Health inequities are socially produced, thus modifiable, unnecessary, and unfair (Whitehead, 1992). Interpersonal violence is a health inequity is considered a traumatic event that may result in neurological and behavioral changes (see Chapter II). The prevalence of trauma experienced at the individual, interpersonal, and community levels is often a result of various and intersecting collective traumas (e.g., historical trauma, racial trauma, oppressive trauma, GBV). Nevertheless, in many health sciences and public health studies, especially in the CPP literature, researchers treat abuse as an individual or interpersonal risk factor for challenging health outcomes instead of being explored and examined from a health (in)equity perspective. Broadening the investigation from abuse to interpersonal violence allows for root cause investigation, ecosocial theorizing, dynamic analyses, and subsequent multi-level intervention and health promotion policies and activities.

Interpersonal violence occurs in multiple forms over the life course. Structural drivers, SDOHs, and intergenerational context influence violence within families and communities (Wilkins, 2014, 2018). The prevalence of trauma experienced at the individual, interpersonal, and community levels is often a result of various and intersecting collective traumas (e.g., historical trauma, racial trauma, oppressive trauma, GBV). Individual behavior and characteristics that contribute to increased or decreased risk for violence victimization or perpetration are significantly shaped by experiencing facilitating and constraining factors at the community and interpersonal levels (Wilkins, 2018, p. S34). In Chapter III, as part of the ecosocial context of CPP and interpersonal violence conceptual framework, I identify the structural drivers and social determinants across the social ecology that influence violence occurrence or protective, multiple forms of violence, perpetration of multiple types of violence, and mental health impacts.

A health equity lens within an ecosocial theoretical framework illuminates the social drivers, SDOHs, social and physiological processes, and health outcomes between advantaged and disadvantaged groups. Ecosocial theory embeds the social-ecological levels and the life course perspective. The exploration and examination of data using constructs of intersectionality, embodiment, pathways of embodiment, the cumulative interplay of exposure, susceptibility, and resistance across the life course and levels, and accountability and agency offer research and practice implications.

II. EMERGING INTERSECTIONS, THEMES, GAPS, AND OPPORTUNITIES:

CROSS-CUTTING SYNTHESIS AND CRITIQUE OF VARIED LITERATURE SETS

A. Health Inequities and Interpersonal Violence

1. Defining health inequities and the problem with individual-level studies of health outcomes

Health inequities are systematic differences in health outcomes that are avoidable and unfair (Whitehead, 1992). Avoidable means they are “systematic, socially produced (and, therefore, modifiable) and unfair” (Whitehead and Dahlgren, 2006, p. 2). Two related persistent problems in public health and general health sciences are that the disparities (differences) across variables are treated as (1) explanatory of the inequitable health outcomes without respect for the social processes and systemic factors based on these variables that influence the inequitable health outcomes and 2) that health is viewed health principally as an individual-level phenomenon, instead of as the product of social-structural context (Bowleg, 2019). These problems are commonplace in traditional biomedical and psychosocial theoretical frameworks. Bowleg (2019) identifies that

the predominance of these conceptualizations explains the relative void of theory, research, and interventions (not to mention education and training) focusing on the multi-level and macro-level (and modifiable) policies and practices that contribute to health inequities (p. 15).

Bowleg calls our attention to discourse used in public health ⁴(Bowleg, 2019). The language of health disparities promotes “naturally occurring differences” (Bowleg, 2019, p. 15), often placing the mode of fault, responsibility, and change at the individual and interpersonal levels. Health inequities, replacing health disparities as terminology, focus on the inequitable and unjust differences between marginalized and privileged groups (Bowleg, 2019; Krieger, 2019). Health inequities exist between

⁴ For further reading, see Bowleg (2017), *Towards a Critical Health Equity Research Stance: Why Epistemology and Methodology Matter More Than Qualitative Methods* and Riemann (2018) *Problematizing the medicalization of violence: a critical discourse analysis of the ‘Cure Violence’ initiative*.

people who have experienced violence and those that have not. Furthermore, health inequities exist relating to interpersonal violence and health-related impact between and across social groups and positions, including gender identity and sexual orientation, socioeconomic position; race and ethnicity; immigration status; age; and neighborhood, and researching these disparate group differences *shifts the gaze* toward uncovering the structural-social processes and patterns that drive health inequities across time and space. In Chapter III, as part of the conceptual framework, I identify some of the structural drivers and social determinants across the social ecology that influence the risk and protection of violence, multiple forms of violence, perpetration of various forms of violence, mental health impacts from sexual assault, and CP.

2. Defining interpersonal violence

Violence is defined as “the intentional use of physical force, or power threatened or actual, against one, another person, or against a group or community, that either result in or have a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation” (Krug et al., 2002, p. 5). Interpersonal violence is between individuals, subdivided into (1) family and IPV and (2) community violence. Interpersonal violence consists of adverse childhood experiences (ACEs); child maltreatment (CM); childhood sexual assault (CSA); intimate partner violence (IPV); teen dating violence (TDV), and elder abuse (Dahlberg and Krug, 2002, p.6). Acquaintance and stranger violence consists of youth violence, assault by strangers, violence related to property crimes, and violence in workplaces and other organizations (Dahlberg and Krug, 2002, p. 6). Figure 1 is a reprint of the World Health Organization’s typology of violence (Dahlberg and Krug, 2002, p. 7). It is organized by social-ecological level and type of violence (Dahlberg and Krug, 2002, p. 7).

Interpersonal violence refers to “physical violence, sexual violence (SV), stalking, and psychological aggression (including coercive acts) by a current or former intimate partner” (Niolon et al., 2017, p. 7). It is a pattern of sexual, physical, or emotional violence by an intimate partner in the context

of ongoing coercive control and power (Rivera et al., 2015). Abuse is a broad definition that includes a range of sexual, physical, and emotional experiences where one person harms another.

A typology of violence

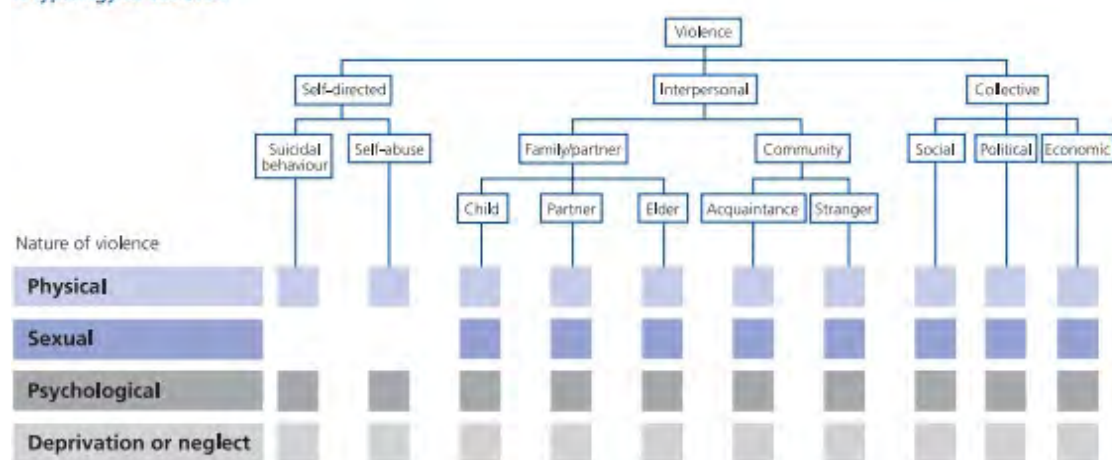


Figure 1. Reprinted. World Health Organization typology of violence (Dahlberg and Krug, 2002, p. 7).

The Center for Disease Control (CDC), the National Center for Injury Prevention and Control conducts the National Intimate Partner and Sexual Violence Survey (NISVS) (Smith et al., 2018). It identifies four types of sexual violence (SV): (1) rape, (2) being made to penetrate someone else, (3) sexual coercion, and (4) unwanted sexual contact. For definitions, measures, and prevalence rates (See definitions in Smith et al., 2018).

Adverse Child Experiences (ACEs) are potentially traumatic or stressful events experienced before the age of 18 years old that include childhood physical, sexual, and emotional abuse, and household dysfunction, referring to a household member who was depressed, mentally ill, or suicidal; alcohol or drug use in the household; incarcerated household family member; violence between adults in a home; parental divorce or separation (Centers for Disease Control and Prevention, 2019; Felitti et

al., 1998; Hamai and Felitti, 2020). Lee et al. (2017) explain that the CDC and WHO call for a more global and inclusive perspective on ACEs. They recommend expanding the core ACE questionnaires to include exposure to community violence and adapting the questions to diverse cultures. Exposure to community violence consists of “the witnessing of and direct victimization by an array of possible violent community events impacting individuals. These include exposure to street crimes such as gang violence, physical assaults, rape, or any number of adverse community conditions” (Lee et al., 2017, p. 69). Child maltreatment involves “abuse or neglect of a child under the age of 18 by a parent, caregiver, or another person in a custodial role (e.g., clergy, coach, or teacher)” (Fortson et al., 2016, p. 8). Child abuse is a broad term that includes the following:

Physical abuse is the use of physical force, such as hitting, kicking, shaking, burning, or other shows of force against a child. Sexual abuse involves inducing or coercing a child to engage in sexual acts. It includes behaviors such as fondling, penetration, and exposing a child to other sexual activities. Emotional abuse refers to behaviors that harm a child’s self-worth or emotional well-being. Examples include name-calling, shaming, rejection, withholding love, and threatening. Neglect is the failure to meet a child’s basic physical and emotional needs. These include housing, food, clothing, and access to medical care (Fortson et al., 2016, p. 8).

Gender-based violence (GBV) and violence against women (VAW) fall under interpersonal violence. These types of violence expose the need for revealing and dismantling root causes—gender inequities that produce gender inequalities that contribute to interpersonal violence. Gender inequities are a social condition that creates unfairness in gender norms (e.g., policies, institutions, entrenched practices, and complex power dynamics). In contrast, gender inequalities refer to unequal treatment based on gender. Gender-based violence refers to harmful (i.e., sexual, physical, psychological, and economic) acts directed at an individual based on gender. It is rooted in gender inequality, the abuse of power, and harmful norms. Violence against women is “any act of GBV that results in, or is likely to result in physical, sexual, or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life” (United Nations Human Rights Office of the High Commissioner, 1993, p. 1). Additional subtypes of interpersonal

violence that impact women and girls include female genital mutilation, forced or early marriage, and honor killings. Women, girls, and gender-diverse people are impacted by sex trafficking (García-Moreno et al., 2015).

3. Conceptualizing interpersonal violence as health inequity and social determinant of health

Interpersonal violence not only leads to adverse health outcomes, but it is also a health outcome and an inequity. Following the logic of Whitehead (1992), interpersonal violence is “systematic, socially produced (and, therefore, modifiable) and unfair” (Whitehead and Dahlgren, 2006, p. 2).

Healthy People 2030 identifies violence as a social determinant of health and objectives to reduce interpersonal violence (Healthy People 2030, 2022). Within the “neighborhood and built environment” domain, Healthy People 2030 objectives are to “reduce homicides,” “reduce physical assaults,” and “reduce children’s exposure to violence” (Healthy People 2030, 2022). The “social and community context” objectives are concerned with increasing positive social support. Specifically, “increase the proportion of parents who use positive communication with their child”; increase the proportion of adolescents who have an adult in their lives with whom they can talk about serious problems” (Healthy People 2023, 2022).

Nevertheless, in the CPP literature, interpersonal violence is often treated as an individual or interpersonal level risk instead of investigated from a health inequity perspective. “These individual-level factors are often also ‘outcomes’ in their own right and linked to experiencing risk and protective factors in communities and relationships” (Wilkins, 2018, p. S34). For example, Greenfield (2010) identifies “child abuse as a life-course social determinant of adult mental and physical health” after integrating findings from community studies that examine relationships between physical, psychological, and sexual abuse in childhood and adult mental and physical health, including gastrointestinal problems (p. 51).

Interpersonal violence is interrelated; they often share the root causes and coincide in families and communities. People may experience more than one type at the same time or during their lives (Anda et al., 2006; Butchart et al., 2004; Centers for Disease Control and Prevention, 2016, 2019; Dube et al., 2003; Klevens et al., 2012; Wilkins et al., 2014). Most people who are victims of violence do not act violently. However, “people who experience one form of violence are at a higher risk of both being a victim of other forms of violence and inflicting harm on others” (Wilkins et al., 2018, p. S32).

Intergenerational context, structural drivers, and SDOHs influence violence within families and communities (Wilkins et al., 2014, 2018⁵). There is abundant social science literature examining the different types of interpersonal violence across different social-ecological levels, social groups, and relationships to other SDOHs.

For example, Breiding et al. (2107) found that people in the preceding year that experienced housing and food insecurity also experienced IPV and sexual violence during that time, controlling for age, family income, race/ethnicity, education, and marital status. Shoham et al. (2020) examined associations between school toileting and lower urinary tract symptoms (LUTS) in their analysis of 3962 female participants from the Avon Study of Parents and Children. They found that all toilet environment factors are associated with at least one lower urinary tract symptom. At age thirteen, holding behavior was associated with all the toilet environmental factors, such as dirty toilets and feeling bullied at toilets. Bullying was associated with all daytime LUTS and nocturia. Lower urinary tract symptoms are associated with CPP. I present several associated SDOHs and sources in Chapter III as part of the theoretical framework, the ecosocial context of interpersonal violence, and CPP.

⁵ Wilkins et al. (2014, 2018) are affiliated with the Division of Analysis, Research, and Practice Integration, National Center for Injury and Prevention at the CDC.

a. **Intersectionality**

Intersectionality is a necessary praxis, framework, and analytical tool to investigate and address SDOHs, such as interpersonal violence and CPP. Intersectionality is powerful when attention is placed on power, social justice, and praxis (Cho et al., 2013; May, 2015). As a framework, Hill Collins and Bilge (2016) frame intersectionality as “critical inquiry and praxis” (p. 31). (Bowleg, 2012) identifies the core tenets of intersectionality most relevant to public health to be as follows:

(1) social identities are not independent and unidimensional but multiple, and intersecting, (2) people from multiple historically oppressed and marginalized groups are the focal or starting point, and (3) multiple social identities at the micro level (i.e., intersections of race, gender, and SES) intersect with macro-level structural factors (i.e., poverty, racism, and sexism) to illustrate or produce disparate health outcomes (p. 1268).

As an analytical tool, Hill Collins and Bilge (2016) identify six enduring core concepts, including “(1) inequality, (2) relationality, (3) power, (4) social context, (5) complexity, and (6) social justice” (p. 25). Bowleg (2021) appeals for the application of “intersectionality praxis” to advance health equity policy in response to public health crises (p. 89). Del Río-González et al. (2021) critique the application of the intersectionality analysis by Mennies et al. (2020). They find that “testing and flattening of intersectionality, the selection and operationalization of intersectional positions, and the use of conventional regression models as a quantitative analytical approach” (Del Río-González et al., 2021, p. 33) dilutes the intent of intersectionality.

The epistemological and ontological roots of intersectionality are in Black Feminism (Crenshaw, 1989, 1991; Hill Collins, 1990, 2000). Kimberle Crenshaw (1989, 1991), professor of law, authored the seminal works of intersectionality to locate Black women and other women of color whose oppression and other experiences were excluded from feminist (predominately White women) and antiracist (predominately Black men) work. A directly relevant application of her analysis and writing is in *Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color* (Crenshaw, 1991).

Crenshaw (1991) examines the race and gender dimensions of violence against women of color.

“Although racism and sexism readily intersect in the lives of real people, they seldom do in feminist and antiracist practices” (Crenshaw, 1991, p. 1242). Intersectionality is not simply adding the experience of gender to the experience of class.

My objective there was to illustrate that many of the experiences Black women face are not subsumed within the traditional boundaries are currently understood and that the intersection of racism and sexism factors into Black women’s lives in ways that cannot be captured wholly by looking at the race or gender dimensions of those experiences separately. I build on those observations here by exploring the various ways in which race and gender intersect in shaping structural, political, and representational aspects of violence against women of color” (Crenshaw, 1991,p. 1244).

She unravels the dynamics of structural intersectionality and shows the harm and danger facing women of color survivors of violence when structural laws and policies are developed and implemented for the voice dominating a social group. Power dynamics within feminist politics worked to explicate the oppressive nature affecting women as a unifying social group. The dominant voice within feminist politics is White women. Crenshaw (1991) explains,

In the context of violence against women, this elision of difference in identity politics is problematic, fundamentally because the violence that many women experience is often shaped by any other dimensions of their identities, such as race and class. Moreover, ignoring differences within groups contributes to tensions among groups, another problem of identity politics that bears on efforts to politicize violence against women (p. 1242).

Crenshaw provides empirical evidence on the following: (1) dynamics of structural intersectionality among women who have experienced physical assault and rape (e.g., biases of immigration law and Domestic Violence (DV); racialized practices influencing unemployment and housing options leave women with few options than to live in “a battered women shelter” (p. 1245). “The physical assault is the immediate manifestation of the subordination they experience” (p. 1245) and recommends that shelters “confront the other multilayered and routinized forms of domination that often converge in these women’s lives, hindering their ability to create alternatives to the abusive relationships that brought them to shelters in the first place” (p. 1245). (2) Political intersectionality,

including the politicization of DV (i.e., DV and antiracist politics, race and the DV lobby, race, and DV support services); political intersectionality in rape (i.e., racism and sexism in dominant conceptualizations of rape; race and the antirape lobby; antiracism and rape); (3) Rape and intersectionality in social science (i.e., racial domination and rape, rape and gender subordination, and compounding the marginalization of rape). She proposes that the representation of women of color in cultural imagery relates to the devaluation of women of color and presents her representational intersectionality analysis.

Interpersonal violence against women disproportionately in the US affects ethnic minorities, including Black/African American, Hispanic/Latina, Native American/Alaska Native, and Asian American women, some of whom are immigrants (Stockman et al., 2015). Sexual minority teens are disproportionately affected by all forms of violence. Similar to Crenshaw's (1991) observation, studies that investigate intersecting social identities that unravel power dynamics or structural and political intersectionality that link to health inequities are needed. George et al. (2020) offers critical insights on addressing structural determinants of gender inequality concerning female sexual and reproductive health, which encourages contemplation from an intersectional lens.

Reaching those most left behind by health interventions requires structural policy interventions across multiple forms of marginalisation. Women and girls are particularly discriminated against in economic and political arenas. Marginalised girls and women are not left out of health and development, but the terms of their inclusion are marginalising. Progress on structural determinants is nuanced and not necessarily linear, given unintended consequences and conservative gender backlash. Policy change to address gender power relations in one area can be sidelined by lack of reform in others areas (p. 19).

b. **Interpersonal violence prevalence data by gender**

Intersectionality is necessary, considering the public health crises disproportionately impacting people of color and low income. However, the trend in global and national data reporting is generally by binary gender groups, male and female. Arguably, this is an example of structural and political intersectionality that hides or marginalizes people with social identities that

intersect at least on two axes (e.g., race and gender). Comparing interpersonal violence prevalence rates among females and males is a VAW lens. Advocacy and education campaigns, for example, tell us that “1 in 4 women” experience IPV but often do not include statistics about people identifying as transwomen, transmen, non-binary or queer, Black women, differently abled women, etc. Pache (2020) offers a political and funding context of why activists emphasized the frequency of violence among women in a historical account of feminist activism in the 1960s through the 1980s.

The WHO and Calouste Gulbenkian Foundation (2014) report that women, children, and older adults face higher rates of non-fatal physical, sexual, and psychological aggression than men. However, their report does not include rates of gender minorities. The report also acknowledges significant gaps in data, limiting knowledge of the full extent of interpersonal violence worldwide. The National Intimate Partner and Sexual Violence Survey (NISVS) is an ongoing, nationally representative survey assessing sexual violence, stalking, and intimate partner violence victimization among adult women and men in the United States (U.S.) (Smith et al., 2018). Literature is dedicated to the controversies and limitations of measuring interpersonal violence (see Fisher, 2008). Table V displays a sample of prevalence data comparing rates of types of interpersonal violence between females and males below.

TABLE V
LIFETIME AND 12-MONTH PREVALENCE RATES AMONG VICTIMS OF CONTACT SEXUAL VIOLENCE,
PHYSICAL VIOLENCE, AND/OR STALKING BY AN INTIMATE PARTNER WITH INTIMATE PARTNER-RELATED IMPACT
BY GENDER --NISVS, 2015

	Females	Males
Lifetime	25.1 % (30 million) or 1 in 4	10.9% (12.1 million) or 1 in 10
12-month	3% (3.6 million)	1.9% (2.1 million)

(Smith et al., 2018)

The data show that both females and men experience interpersonal violence, yet the types of violence vary. Furthermore, the literature debates why females engage in interpersonal violence (Giordano and Copp, 2019). Although the differences in interpersonal violence among women and men are not as disparate as once thought in the US, girls and women report greater IPV and CSA before age eighteen and more significant IPV-related impact during their lives than males (Smith et al., 2018). Twenty-six percent of females and 15% of males who were victims of contact SV, physical violence, and stalking by an intimate partner in their life first experienced these or other forms of violence by that partner before age 18 (Smith et al., 2018). Tables VI present the IPV-related impact (Smith et al., 2018). For definitions of the constructs and details of the IPV-related impact, refer to Smith et al. (2018).

TABLE VI.
COMMONLY REPORTED INTIMATE PARTNER VIOLENCE-RELATED IMPACT AMONG VICTIMS OF
CONTACT SEXUAL VIOLENCE, PHYSICAL VIOLENCE, AND/OR STALKING BY AN INTIMATE PARTNER DURING THEIR
LIFETIMES-- NISVS, 2015

	Females	Males
Concerned for their safety	20.5% (24.5 million)	5.3% (5.9 million)
Being fearful	17.6 % (21 million)	4.4% (4.9 million)
Experienced PTSD symptoms	14.9% (17.8 million)	3.4% (3.8 million)
Injured	12.4% (14.9 million)	4.0% (4.5 million)
Needed help from law enforcement	11.5% (13.8 million)	3.5% (3.9 million)

(Smith et al., 2018)

The literature demonstrates that gender inequalities operate at all social-ecological model (SEM) levels, including the structural, community, interpersonal, and individual (George et al., 2020; Montesanti and Thurston, 2015). Suggested literature examining the relationship between structural-level measures and health outcomes includes (Homan, 2019; Krieger, 2019; Montesanti and Thurston, 2015; Shannon et al., 2017). Roschelle (2017) links structural gendered and racialized poverty and violence with the everyday community and interpersonal life as she conducted a four-year ethnographic study among homeless Latina and Black women and their children in San Francisco. Camenga et al. (2019) linked gender disparities with the ability to easily access public toilets in a focus group study with adolescent females exploring bladder health. Gendered violence frequently occurs within homes [interpersonal level] and has increased exponentially during the Covid-18 pandemic (Fenster, 2005; Morrow and Parker, 2020; Sweet and Escalante, 2010). In Chapter III, as part of the theoretical framework, the ecosocial context of interpersonal violence and CPP, I present several associated social-ecological factors and sources.

4. **National priority to address the shared root causes of interpersonal violence**

There is a national drive to realign priorities to address the shared root causes of interpersonal violence. The CDC's Division of Violence Prevention (DVP) Guiding Principles for the Strategic Priorities for 2020-2024 include: (1) advancing economic, gender, and racial equity; (2) enhancing positive relationships and environments; (3) addressing factors that cut across multiple forms of violence; and (4) prioritizing efforts that create societal-and community-level impact (Centers for Disease Control and Prevention, 2021). The strategic priorities build on the CDC's attempt over the past eight years to coordinate violence prevention and intervention approaches that consider the connections across interpersonal violence (Wilkins et al., 2014, 2018⁶). Additional CDC reports agree

⁶ Wilkins et al. (2014, 2018) are affiliated with the Division of Analysis, Research, and Practice Integration, National Center for Injury and Prevention at the CDC.

that multi-sector and inter-governmental coordination and collaboration are required to break down silos necessary to prevent ACEs and IPV (Centers for Disease Control and Prevention, 2016, 2018; Niolon et al., 2017⁷). Violence prevention and intervention are inherently siloed due to separate funding streams, types of service delivery (e.g., health care, family and child services, law enforcement, legal system, education, research, and public health departments), and organizational structures (Wilkins et al., 2014, 2018).

5. **Conceptualizing interpersonal violence as trauma**

Pache (2020) traces the history of social changes beneath the development of research and policies on interpersonal violence in North America and posits that the status of interpersonal violence is the outcome of moral transformations and political actions. The changes include conceptualizing: (1) violence as excess, (2) violence as deviance, (3) violence as conflict, (4) violence as oppression, and (5) violence as trauma (p. 1). According to Rothschild (2011), the threat or harm to life or body must be present to qualify as a traumatic event (p. 20). Individuals' perceptions of the experience and effects impact the determination of a traumatic event (Substance Abuse and Mental Health Services Administration, 2014a). Psychological trauma is the reaction of the nervous system and the mind to an incredibly overwhelming and life-threatening experience that it cannot come to terms with the experience (Rothschild, 2011, p. 18). The hallmark feature of the acute stress response that occurs in the face of perceived danger is the flight-fight (hyperarousal) -freeze (hypoarousal). Complex physiological changes to the nervous system occur from traumatic and toxic stress, which produce psychological and psychosomatic (or effects of trauma on the body) (Rothschild, 2011, p. 18). Understanding violence as trauma is significant because of the profound mental and physical health,

⁷ Niolon et al. (2017) is affiliated with the National Center for Injury and Prevention at the CDC.

social, and economic implications over the life course, often resulting from psychological trauma and toxic stress.

Further, substantial intergenerational and community effects influence the spread of trauma and traumatic stress among families and communities. Of the people who have experienced trauma, approximately 10% of men and 20% of women develop PTSD (Rothschild, 2011, p. 19). People who are more susceptible to experiencing PTSD are more likely to have experienced: certain types of trauma, particularly military combat or SA, injury during the event, lack of support from a loved one after a traumatic event, long-lasting or repeated trauma, history of anxiety or depression, initial solid reaction to the event, very intense trauma (American Psychiatric Association, 2013a). As a result of PTSD, those that suffer from it have a chronically high-stress level.

Poly victimization is common among survivors of interpersonal violence and begins in childhood. Cook et al. (2005) comprehensively reviewed the literature on complex trauma. Complex trauma describes the “dual problem of children’s exposure to multiple traumatic events and the impact of this exposure on immediate and long-term outcomes”(Cook et al., 2007, p. 4). These events “can interfere with developing a secure attachment within the caregiving system” (Cook et al., 2007, p. 4). Complex trauma processes contribute to the “loss of core self-regulation and interpersonal relatedness capacities, “which places children at risk for “additional trauma exposure and cumulative impairment (e.g., psychiatric, and addictive disorders; chronic medical illness, legal, vocational, and family problems). These challenges often extend “through adolescence and adulthood” (Cook et al., 2005, p. 390).

Following their literature review, Cook et al. (2005) developed their framework for understanding complex trauma in children, “domains of impairment in children exposed to complex trauma” (p. 392). The seven domains include attachment, biology, affect regulation, dissociation, behavioral control, cognition, and self-concept. Under the biology domain, they list several symptoms

that agree with much of the CPP literature presented, including the following, “sensorimotor developmental problems; analgesia; problems with coordination, balance, body tone; somatization; increased medical problems across a wide span (e.g., pelvic pain, asthma, skin problems, autoimmune disorders)” (p. 392).

A review of the concepts of stress will help grasp the concepts of trauma and traumatic stress.

a. **Stress and toxic stress**

Selye (1956) introduced the psychosomatic nature of stress. While his research on stress provided a basic definition, it was novel and proved fundamental. Positive or negative stress is the response of any organism to a stressor. A stressor necessitates a degree of effort from the mind or body. Toxic stress was initially introduced as one element in a conceptual classification based on two other stress responses in children. It was based on postulated differences in their possibility to cause lasting biological effects (Shonkoff et al., 2020). Table VII displays the classification of stress responses in children.

TABLE VII.
CLASSIFICATIONS OF STRESS RESPONSES IN CHILDREN

Good or positive stress	Physiologic response, such as transient or mild increases in heart rate and blood pressure and mild increases in stress hormones.
Tolerable stress	Serious, temporary stress responses, buffered by supportive relationships. Examples include death or illness in a family member.
Toxic stress	The result is intense, frequent, or prolonged activation of stress response systems without supportive relationships.

(Center for the Developing Child at Harvard University, 2022; Shonkoff et al., 2020).

The cumulative toll of toxic stress from early childhood adversity, particularly exposure to interpersonal violence and neglect, can alter brain development and affect attention, decision-making,

learning, and response to stress (Centers for Disease Control and Prevention, 2019). Many body systems are affected by stress, including the brain and the numerous mediators involved, such as adrenalin and cortisol (McEwen, 2017). The term “allostasis” references the physiological processes of producing hormones in the body that generate a stress reaction. For further reading on toxic stress, health effects, and connection to racism and SDOHs, see the Center for the Developing Child at Harvard University (2022); Shonkoff et al. (2020).

b. **Allostatic load**

Allostatic load refers to the long-term, cumulative effects of stress on physiological functioning across multiple biologic systems in the body (McEwen and Seeman, 2018). “Inefficient management allostasis” is when the brain and nervous system do not turn off the stress response once it is no longer needed (McEwen and Rasgon, 2018, p. 14). Conceptually, allostatic load explains that life experiences and health-related behaviors result in dysregulated brain and body communication. The dysregulation leads to systemic pathophysiology and brain alterations that promote psychiatric disorders (McEwen and Rasgon, 2018).

c. **Traumatic stress, dysregulation, and dissociative disorders**

PTSD and other traumatic stress syndromes and dissociative disorders are common psychiatric disorders developed by people who experience allostatic load and subsequent dysregulated brain-body communication, particularly the CNS. Lanius et al. (2014) integrated basic science findings in the affective and cognitive neurosciences to better understand traumatic stress syndromes and dissociative disorders. See Lanius et al. (2014) and the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 2013a) for further reading. People who suffer from traumatic stress syndromes and dissociative disorders experience severe challenges integrating sensory, motor, autonomic, affective, and cognitive information. It is often difficult to “attend to selected stimuli and lay down memories” (Lanius et al., 2014, p. 5). Optimally functioning

people, on the other hand, can focus select stimuli effortlessly and recall or not retrieve memories for ongoing well-being (Lanius et al., 2014).

The two subtypes of the trauma response are hyperarousal and hypoarousal. Each type represents distinctive pathways to chronic stress-related psychopathology (Paulsen and Lanius, 2014). Both states can eventually wear a person down physically, mentally, and emotionally (Substance Abuse and Mental Health Services Administration, 2014a).

i. **Hyperarousal response**

The hyperarousal response in PTSD is commonly studied.

Characterizations of hyperarousal include hypervigilance or a constant state of arousal, the fight-or-flight response. The body's innate biological response is to focus primarily on defense mobilization. The sympathetic nervous system (SNS) arousal releases catecholamines, including adrenaline (epinephrine) and noradrenaline (norepinephrine), and likely mediates the hyperarousal response. The chemical release tends to co-occur by the pre-frontal cortex's shutting down or limited capacity, which narrows consciousness (Paulsen and Lanius, 2014, p. xx). Given the nature of the autonomic nervous system (ANS), the SNS activates the parasympathetic nervous system (PNS), known as dorsal vagal activation. The dorsal vagal activation is the bedrock of the dissociative response and is a standard neurobiological mechanism among mammals, humans, and reptiles. It is associated with passive defense responses, such as the freeze response (Paulsen and Lanius, 2014).

ii. **Hypoarousal response**

Hypoarousal is primarily dissociative, characterized by numbing or avoiding (Paulsen and Lanius, 2014).

Dissociative phenomena involve alterations in consciousness underlying normal integration of thought, memory, emotions, sense of self, body awareness, and perception of the external environment. Flashbacks in PTSD, for example, combine dissociation of future orientation memory of surviving the trauma (Paulsen and Lanius, 2014, p. 117).

Dissociation includes a variety of experiences like depersonalization, derealization, amnesia, identity disorders, PTSD, complex PTSD, dissociative disorders, somatoform disorders, personality disorders, such as borderline personality disorder, and attachment disorders. In addition to occurring among many people with psychiatric disorders, dissociative experiences are reported in healthy people (Paulsen and Lanius, 2014). Increased disease severity, chronicity, and sometimes reduced treatment response across trauma-related and other psychiatric disorders are frequently associated with dissociative experiences (Lanius et al., 2018, p. 1). See Rothschild (2017) for the “Autonomic Nervous System: Precision Regulation” figure to view the six levels of ANS arousal states and the associated bodily symptoms (reprinted at www.somatictraumatherapy.com).

d. **Traumatic memory**

A basic description of traumatic memory is helpful because the nature of traumatic memory is why people can become retraumatized or relive the memories when encounter by a trigger. Traumatic memories are fixed and static. In contrast, ordinary memories (positive or negative) vary over time.

They are imprints (engrams) from past overwhelming experiences, deep impressions carved into the sufferer’s brain, body, and psyche. These harsh and frozen imprints do not yield to change, nor do they readily update current information. The ‘fixity’ of imprints prevents us from forming new strategies and extracting new meanings. There is no fresh, ever-changing now and no real flow in life.... traumatic memories tend to arise as fragmented splinters of inchoate and indigestible sensations, emotions, images, smells, tastes, thoughts” (Levine, 2015, p. 7).

Depending on the severity, re-traumatization can reactivate the traumatic stress response, adding to chronic or toxic stress. See Levine (1998); Levine et al. (2018); Levine and Lender (2020); Siegel (1996), (1997), (2001) for further reading on memory and trauma.

e. **Synergistic nature of interpersonal violence and trauma**

Gender-based violence and community violence are leading phenomena rooted in the synergistic oppression-based, collective, and individual trauma ecosystem. Structures of

patriarchy, racism, colonization, and heteronormativism intersect interpersonal violence experiences (Pain, 2021). The Substance Abuse and Mental Health Services Administration (2014b) draws on SEM for understanding trauma and its effects (pp. 15 – 16). Their SEM conveys the bidirectional influences multiple contexts often have on accessing behavioral health services among people who have experienced trauma. See Substance Abuse and Mental Health Services Administration (2014b) to view the SEM figure (p. 15) and the exhibit displaying the levels within the SEM of trauma and its effects. The levels include individual factors, interpersonal factors, community and organizational factors, societal factors, cultural and developmental factors, and periods in history (p. 16). Conceptualizing violence as trauma helps to disentangle many of trauma's structural, social, and biological causes and consequences. Moreover, it offers many intervention and prevention points across the life course, levels of the social ecology targeted at structural drivers, and intermediary SDOHs.

f. **Individual trauma**

The Trauma and Justice Strategic Initiative Workgroup developed a conceptual definition of trauma,

Trauma results from an event, or series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life-threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being (Substance Abuse and Mental Health Services Administration, 2014a, p. 7).

First, the event(s) element may be single or repeated over time. Events consist of the actual or extreme threat of physical or psychological harm, such as violence or severe, life-threatening neglect of a child, jeopardizing healthy development (Substance Abuse and Mental Health Services Administration, 2014a). The event element is rooted in the fifth version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (Substance Abuse and Mental Health Services Administration, 2014a, p.8). The DSM-5 necessitates all conditions classified as “trauma and stressor-related disorders”

to include “exposure to a traumatic or stressful event as a diagnostic criterion” (American Psychiatric Association, 2013).

The second element, the subjective individual’s experience of these events or circumstances, assists in establishing whether it is a traumatic event.

TABLE VIII.
THE THREE “E’S” OF SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION’S (2014)
CONCEPTUALIZATION OF TRAUMA

Element	Definition
Event(s)	Events consist of the actual or extreme threat of physical or psychological harm, such as violence or severe, life-threatening neglect of a child, jeopardizing healthy development.
Experience (subjective)	How the individual labels, assigns meaning to and is disrupted physically and psychologically by an event will contribute to whether or not it is experienced as traumatic. Traumatic events, by their very nature, set up a power differential where one entity (i.e., a person, an event, or a force of nature) has power over another.
Effects	Short to long-lasting adverse effects of trauma may occur immediately or later in life.

(Substance Abuse and Mental Health Services Administration, 2014a)

How the individual labels, assigns meaning to and is disrupted physically and psychologically by an event will contribute to whether it is experienced as traumatic. Traumatic events, by their very nature, set up a power differential where one entity (i.e., a person, an event, or a force of nature) has power over another (Substance Abuse and Mental Health Services Administration, 2014a, p. 8).

Emotions and actions of shame, guilt, humiliation, self-blame, betrayal, or silencing often shape the experience of the event. Behavioral, emotional, and non-verbal dynamics among family members, partners, and social responses shape these immediate and long-term harmful feelings dynamically and continuously toward oneself. For instance, IPV and family members may threaten children or partners to keep silent about violence and neglect. The threats can come in many shapes, accompanied by controlling behaviors. Threats contribute to silence and fear of reaching out for help. Betrayal, shame,

and self-blame are common feelings for people across their life spans who experienced childhood physical, sexual, and emotional abuse or severe neglect by a caregiver (Substance Abuse and Mental Health Services Administration, 2014a).

Her father began forcing her to masturbate him and do other sexual acts before she was four years old, always telling her it was her fault.

My father blamed my hands like I made him have an erection, and now I had to make it go away. As a little girl, I'd look at them and say, 'Bad hands!' When I finally dared to say no to my father at age seven, he raped me, holding my hands behind my back, and I bled so much I almost died. So now, my hands get cold whenever I speak up for myself.

He said he'd kill her if she told, so she shut down, not letting herself feel or remember anything. But eight years ago, memories began to resurface.

It happened during a Feldenkrais session, and the memories were almost violently in my body. My family wanted to deny it, which was very difficult for all of us. When it was a secret, I was able to pretend he never did this, but. I've confronted him, and he's agreed to meet with a mediator. It's hard to admit, but I want a relationship with my dad— Cheryl (Goff-LaFontaine, 2005, p. 15).

Evidence shows that societal responses also perpetuate these emotional states and impede recovery, thus further contributing to the events' experience. Ullman (2010) demonstrates that both actual and adverse social reactions and anticipated negative social reactions originate from broader social norms and attitudes about rape (e.g., rape myths), maintaining a "rape-supportive environment" (p. 14). "Silencing is a process" is a construct, meaning silencing occurs before and after rape disclosures and is another way survivors are re-victimized. Judgmental responses often reinforce survivors' perceptions and feelings of self-blame and legitimization as rape victims (Ahrens, 2006; Ullman, 2010).

Additional factors that may contribute to these emotional and behavioral states include the availability of social support, the developmental stage of the individual, and the cultural beliefs of the individual, their families, and embedded social networks (Substance Abuse and Mental Health Services Administration, 2014a). Conversely, these factors could potentially protect an individual from experiencing trauma. In response and searching for essential needs to end the pain and isolation, many

rape survivors discover spaces among fellow survivors providing solidarity and safety (Campbell et al., 2004; Ullman, 2010).

Finally, the third element of trauma is the long-lasting adverse effects, immediately or later in life. The products may range from lasting short to long-term. Some “individuals do not recognize the connection between the traumatic events and the effects” (Substance Abuse and Mental Health Services Administration, 2014a, p. 8). Individual-level examples of adverse effects contributing to trauma include challenges coping with everyday stressors and cognitive processes (e.g., memory, attention, thinking; regulating behavior, or controlling the expression of emotions); trusting and benefiting from relationships; and altering one’s neurobiology and health (Substance Abuse and Mental Health Services Administration, 2014a).

g. **Oppression-based trauma**

Oppression-based trauma recognizes that communities may be impacted by various and intersecting collective traumas, such as racial, systemic, cultural, and historical traumas (Brave Heart and DeBruyn, 1998; R. T. Carter, 2007; Chioneso et al., 2020; Comas-Díaz et al., 2019; Goldsmith et al., 2014; Gómez & Gobin, 2020; Kira, 2010; Pain, 2021; Sotero, 2006; Walters et al., 2011). Reference Chapter IV, Aim 3 for further reading, including racial trauma. Jefferson (2021) and Holmes et al. (2016) recommend that public health addresses oppression-based trauma through social-ecological approaches.

6. **Growing trauma-informed systems to prevent traumatization, re-traumatization, and promote safety**

There is an increased interest in shifting toward trauma-informed systems and cultures to prevent traumatization, re-traumatization, and promote safe and trusting connections.

7. Health inequities among survivors of violence

Population patterns demonstrate that experiencing violence, especially multiple types, can hurt youth's development and disproportionately impact adult health (Centers for Disease Control and Prevention, 2016, 2019; Niolon et al., 2020). The experience of violence is an adverse health outcome caused by overlapping structural drivers and SDOHs across the social ecology (Armstead et al., 2019; Wilkins et al., 2018). The impacts of violence and trauma are associated with multiple adverse health outcomes.

Mounting evidence over the past 30 years demonstrates significant associations between IPV with multiple adverse physical and mental health conditions and health risk behaviors (Campbell and Lewandowski, 1997; Dillon et al., 2013; Stockman et al., 2015; Watson-Singleton et al., 2019). These include CP, gastrointestinal problems, sexually transmitted diseases (STDs), sleep disturbance, depression, anxiety, PTSD, injuries, and broken bones (Dillion et al., 2013). Many studies demonstrate that psychological IPV impacts women survivors' psychosocial health, specifically depression and PTSD (As-Sanie et al., 2014; Bryant et al., 2016; Meira Siqueira-Campos et al., 2019; Pierce and Christianson, 2015; Romão et al., 2009; Seng et al., 2005; Stein et al., 2017; Till et al., 2019). Some researchers find that psychological IPV has an independent effect on the development of PTSD (Meltzer-Brody et al., 2007).

Adverse childhood experiences research demonstrates weakened health across lifecourse and generations and increased risk by education level, occupation, and income [structural drivers of SDOH inequities] (Centers for Disease Control and Prevention, 2019; Metzler et al., 2017). ACE studies produce replicable evidence of the dose-response relationship for increased risk of chronic conditions. These include human immunodeficiency virus (HIV) and STDs, traumatic brain injury, unintended pregnancy, pregnancy complications, fetal death, depression, anxiety, suicide, PTSD, cancer, diabetes, alcohol, and SUDs (Centers for Disease Control and Prevention, 2019). Many studies demonstrate that psychological

IPV impacts the intermediary SDOHs, specifically women survivors' psychosocial health, linking depression and PTSD. Some researchers find that psychological IPV has an independent effect on the development of PTSD.

Evidence indicates how poly-victimization, cumulative lifetime exposure to interpersonal violence, and ACEs tend to lead to more significant health impacts (Campbell et al., 2009; Finkelhor et al., 2007; Pinderhughes et al., 2015; Sledjeski et al., 2008; Steine et al., 2017; Turner et al., 2011). Poly-victimization is the exposure to multiple forms of violence simultaneously and throughout one's life course (Finkelhor et al., 2007; Pinderhughes et al., 2015; Turner et al., 2011).

8. **Chronic pelvic pain is a health inequity among women who survived interpersonal violence**

A striking collection of the literature shows female adolescents and adult survivors of interpersonal violence experience CPP at a significantly higher rate than girls and women without interpersonal violence experiences (As-Sanie et al., 2014; Ayorinde et al., 2015; Heim et al., 2000; Mark et al., 2008; Nelson et al., 2012; Poleshuck et al., 2005; Schrepf et al., 2018; Stein et al., 2017; Till et al., 2019). Evidence suggests a history of interpersonal violence is 1.5-2 times the risk of conditions often involving CPP than those without interpersonal violence experiences (Schrepf et al., 2018). Lesserman and Drossman (2007) found similar findings involving GI complaints and abuse.

Recent evidence from the Multidisciplinary Approach to the Study of Pelvic Pain (MAPP) Research Consortium's multi-site two-year longitudinal cohort study suggests that females and males with a high ACE score have higher urologic chronic pelvic pain syndromes (UCPPS) compared to healthy controls (n = 421) (Schrepf et al., 2018). Females and male UCPPS patients showed higher current and lifetime stress levels, increased self-report of cognitive deficits, poorer illness coping, and more widespread pain symptoms than sex-and-education match health controls. However, female UCPPS patients reported increased self-reported childhood adversity and more general symptoms of pain and

discomfort. Worse physical well-being mediated the relationship between ACE severity and less likelihood of painful symptom improvement (odds ratio [OR] = .871, $p = .007$) and a greater probability of distressing symptom worsening (OR = 1.249, $p = .003$) at one year (Schrepf et al., 2018). On average, the UCPPS participants had experienced 1.7 of 6 ACE categories, and approximately 78% of the sample reported at least one ACE. “Interpersonal violence (both physical and sexual) was roughly twice as likely to be reported by UCPPS participants compared with healthy controls” (Schrepf et al., 2018, p. 872). Based on UCPPS prevalence U.S. prevalence data (Berry et al., 2011), Schrepf et al. (2018) estimate that between 3.3 and 8.5 million people with UCPPS have experienced some form of ACE, which in turn “reduces the likelihood of medium-term improvement” (p. 872).

In a 30-year longitudinal, matched case-control study, Raphael and Widom (2011) found that the combination of childhood abuse or neglect and PTSD led to a significant increase in most types of pain complaints, including abdominal or belly pain, pain when urinating, or burning in the genital area, in middle adulthood. A history of childhood abuse or neglect and PTSD markedly increased most pain complaints (Raphael and Widom, p. 168).

Rosenblat et al. (2020) analyzed self-report data from International Mood Disorders Collaborative Project to compare the rate of IBS in participants with confirmed diagnoses of major depressive disorder (MDD; $n=279$) or bipolar disorder (BP; $n=219$). The researchers sub-grouped the data and compared the ACEs history. In total, 13.8% reported a diagnosis of IBS. They adjusted for age and sex. The history of CSA was associated with increased rates of IBS in mood disorder participants [adjusted odds ratio (AOR) = 1.95]. Kanuri et al. (2016) found that IBS patients with abuse experiences experienced more severe abdominal pain and illness-related disability, an effect partially mediated by comorbid mood. In an additive trend, multiple abuse experiences negatively affected IBS symptoms and health-related quality of life.

Harris et al. (2018) identified laparoscopic-confirmed endometriosis in a sample of 3394 women diagnosed as part of the prospective cohort (n=60,595) of premenopausal women from 1989-2013 as part of the Nurse's Health Study II cohort. They found that the risk of endometriosis was greater among women who experienced severe abuse (RR = 1.20; 95% CI = 1.06, 1.37) or severe sexual abuse (RR = 1.49; 95% CI = 1.24, 1.79). Consistent with evidence from the interpersonal violence literature regarding the cumulative impact of poly victimization, the researchers discovered a 79% increased risk of endometriosis for women reporting severe-chronic abuse of multiple types (95% CI = 1.44, 2.22). The associations between abuse and endometriosis were stronger among women presenting without infertility, a group more likely to have been symptomatic concerning pain.

There is a preponderance of cross-sectional and case-control studies demonstrating associations between interpersonal violence and CPP and overlapping symptoms and conditions (As-Sanie et al., 2014; Beesley et al., 2010; Chiu et al., 2017; Cichowski et al., 2013; Drossman, 2011; Imhoff et al., 2012; Jundt et al., 2007; Kanuri et al., 2016; Korterink et al., 2015; Latthe et al., 2006; Leserman et al., 1996; Leserman and Drossman, 2007; Liebermann et al., 2018; Mark et al., 2008; Meltzer-brody et al., 2007; Park et al., 2016; Poleshuck et al., 2005; Randolph and Reddy, 2006; Schliep et al., 2016; Volpe et al., 2020) In addition to clinic studies, there are general community surveys examining the relationship between sexual and physical abuse with gastrointestinal disorders (see the review by Lesserman and Drossman, 2007).

Noteworthy, most CPP studies do not use the term interpersonal violence. Instead, the studies measure abuse. However, clinical researchers rarely define abuse in CPP studies. As an alternative, clinical research qualifies abuse by life course phase (e.g., childhood, adolescent, and adult) and type (i.e., physical, sexual, and emotional/psychological abuse). A few studies investigate whether the abuse occurred by an intimate partner (Mark et al., 2008) and or interpersonal relationships during childhood abuse and maltreatment (Chiu et al., 2017; Nelson et al., 2012), which limits understanding of

psychological abuse (e.g., insults, humiliation, control). Minimal studies examine exposure to community violence or IPV as a child. I did not locate any studies examining interpersonal discrimination, which can involve interpersonal violence and contribute to racial trauma (Chioneso et al., 2020). At best, abuse is operationalized by listing instrument items highlighting specific instances of abuse. Limited standardized sexual, physical, and emotional abuse history tools are used in the CPP and abuse literature.

The most frequently standardized and valid screening questionnaire used to measure abuse in CPP, gastrointestinal, and pain clinical and community samples is the Sexual and Physical Abuse History Questionnaire (Leserman et al., 1995). The Sexual and Physical Abuse History Questionnaire quantifies the types of sexual abuse and the frequency of physical abuse experienced in childhood (qualified before age 13) and adulthood (ages 14 and older). The sexual abuse questions had acceptable sensitivity (70%) and specificity (93%), although the accuracy was somewhat lower for the physical abuse questions with sensitivity (69%) and specificity (73%) (Leserman et al., 1995). Although the emotional and verbal abuse questions used in population-based samples maintain strong face validity, researchers have not statistically validated these questions (Koloski et al., 2005; Talley et al., 1994). The response frequency format is like physical abuse questions.

I opted to focus on interpersonal violence because it is broad and encompasses the forms of abuse measured in these studies. It is beyond the scope of my dissertation to differentiate CPP health effects by type of abuse and when it occurred. I considered this, but the evidence became increasingly apparent that there are many gaps in the available research to contribute to this line of inquiry, including cross-sectional study, an instrument used, the discretion of the researcher of what types and life course occurrences to include, and recall bias in self-report. In addition, as previously discussed, the women who are most at risk appear to encounter multiple types of experiences of interpersonal violence across their life course, often beginning at an early age.

There are national and global community surveys accessing the physical and mental health effects among survivors of GBV that confirm that women who experience abuse are more likely to have comorbid CP conditions, including CPP, IBS, CFS, FM, PTSD, and depression, compared to non-abused women (Larsen et al., 2016; Meltzer-Brody et al., 2007; Sachs-Ericsson et al., 2007; Tietjen et al., 2010). Survivors also experience more significant post-traumatic stress, including PTSD, and tend to experience more depression and anxiety.

Children with PTSD are significantly more likely to experience gastrointestinal problems, asthma, allergies, attention-deficit/hyperactivity disorder (ADHD), and headaches than those without PTSD (Grogan and Murphy, 2011). In a study of approximately 30,000 Medicaid claim records, girls and adolescent females with PTSD they reported higher rates of chronic disease, including CPP, IBS, dysmenorrhea, CFS, and FM, than those without PTSD (Seng et al., 2005).

9. **Chronic pain is associated with interpersonal violence**

The high prevalence between CPP and interpersonal violence is consistent with evidence that CP is associated with interpersonal violence. In general, women reported CP symptoms two times more than males (Browning et al., 2014; Giordano and Copp, 2019). Practitioners and researchers probed and scrutinized the association between CP conditions and interpersonal violence. Most case-control and cross-sectional studies support the relationship between self-reported ACEs and CP conditions (Golding, 1994, 1999; Goodwin et al., 2003; Sachs-Ericsson et al., 2007; E. A. Walker et al., 1999; Wuest et al., 2010). Afari et al. (2014) and Paras et al. (2009) confirmed this relationship through meta-analysis. Studies continue to replicate findings that demonstrate a dose-response relationship between cumulative childhood adversities, primarily and adult symptom outcomes, including comorbid CP conditions, and specifically CPP, depression, and PTSD (Nelson et al., 2012a; Raphael and Widom, 2011; Schrepf et al., 2018a; Steine et al., 2017).

B. **Shifting Paradigms in Chronic Pelvic Pain Literature: From the Biomedical Model to the Biopsychosocial Model**

The advent of such studies investigating the relationship between interpersonal violence and CP was a break from the longstanding, predominant biomedical approach to CP. A shift in the literature began to take place when Engel introduced the Biopsychosocial Model (1977). He challenged what he described as the reductionist and dualistic assumptions of the biomedical model and its subsequent limitations (1977)—rooted in Cartesian Dualism – commonly referred to as the “mind-body” dichotomy – the traditional biomedical model views processes of the mind and body as independent from one another and studies the pathophysiological mechanisms leading to disease (including CP) (Bailey et al., 2017; Krieger, 2005, 2008a, 2011, 2014, 2019; Krieger et al., 2013). Engel describes that the biomedical model “leaves no room...for the social, psychological, and behavioral dimensions of illness” (Engel, 1977, p. 27). He presents the Biopsychosocial Model as a guide for addressing these factors in health care delivery (Engel, 1981).

Since this time, additional research has critically explored the problematic and limiting nature of approaching CPP only through a biomedical approach (see Grace, 2000) and illuminated the dynamic, bidirectional interactions between the body and brain (see Pert, 1999), supporting this shift to explore the complex interaction of social, behavioral, and psychological, and physiological factors contributing to CPP and other CP syndromes. Chronic pelvic pain investigations' epistemology has somewhat pivoted from sole, focused Cartesian, positivist paradigms toward recognizing the need for a whole-person, biopsychosocial approach. For example, the biopsychosocial model is used to depict the interaction between psychosocial processes, biological factors, and health behaviors, leading to vulnerability, resistance, or illness, disease onset and symptoms, progression, and quality of life s (Lutgendorf and Costanzo, (2003).

Although the “mind-body” connection does not fit the biomedical understanding in the U.S., Holistic philosophy and medicine have existed for centuries, particularly in non-Westernized societies. For example, the field labeled “Complementary Alternative Methods” (CAM) comprises practices and techniques from many philosophies and forms of medicine and healing (Table IX).

These philosophies and practices illuminate different aspects of the complex, dynamic interactions within body, mind, and spirit, representing the whole self. Neuroscience, psychology, and health science research explore and examine many practices, particularly mindfulness and yoga, to recover or reset the CNS, build resilience, and create new neural pathways for the brain and body to cope with stressors, anxiety, depression, PTSD, and CP (Gonçalves et al., 2016, 2017; Moscoso et al., 2019; Shahabi et al., 2016; Siegel, 2003, 2006, 2009; Solomon and Siegel, 2003; Staples et al., 2013; Sullivan et al., 2018; Tul et al., 2011).

TABLE IX
A SELECTION OF PHILOSOPHIES AND PRACTICES THAT INTEGRATE
MIND AND BODY AND THEIR ORIGINS

<ul style="list-style-type: none"> • <i>Chinese medicine, philosophy, martial arts</i> (e.g., acupuncture, qigong, tai-chi, massage, herbal remedies)
<ul style="list-style-type: none"> • <i>Ayurvedic medicine</i>, originating in ancient India
<ul style="list-style-type: none"> • <i>Yoga</i> tracing back to several thousands of years ago in the Himalayas, India, and spreading to different parts of the world, including other countries in Asia, the Middle East, Northern Africa, and South America (Basavaraddi, 2015), long before it morphed into a Westernized fitness and wellness phenomenon, highly contextualized in capitalists’ markets.
<ul style="list-style-type: none"> • <i>Zen Buddhism</i>, Soto branch originated in Japan (13th century, 1200-1253); joined Taoism and Confucianism in China. Mindfulness meditation is rooted in Zen Buddhism.
<ul style="list-style-type: none"> • <i>Aikido</i> originated in Japan. Aikido is the cultivation of ki, a vital force, the mental/spiritual energy. "The body is the concrete unification of the physical and spiritual created by the universe" (Sotnak, 2021).

C. **Literature Studying Biopsychosocial Correlates**

While medical research still grounds itself in the biomedical model, the current literature explores the effect of various social and psychological states on the physiological processes contributing to the pain experience. A limitation of this literature is that it rarely connects the social ecology, structural drivers, SDOHs, and life-course perspectives. Nevertheless, it contributes to understanding changing social and biological patterns contributing to health outcomes over time. The following sections introduce basic concepts about the physiological changes associated with CPP in various psychosocial stressors (e.g., abuse, stress, and mental illness). Refer to Section 5. a.b.c. for the descriptions of stress, toxic stress, allostatic load, and the two common traumatic stress responses: hypoarousal and hyperarousal.

1. **Inflammation and centralized sensitization**

Alterations in the neuroendocrine and immune systems that contribute to the pain experience include inflammation and centralized sensitization (As-Sanie et al., 2014; Brawn et al., 2014; Pierce and Christianson, 2015; Schrepf et al., 2018a; Till et al., 2019). A recent well-represented epidemiologic cohort study conducted by the MAPP research consortium reveals that men and women with CPP experience alterations in brain function that match the evolution of their pain experienced. This result supports findings from the many functional, chemical, and structural neuroimaging studies showing abnormalities in patients' brains with COPCs (Schrepf et al., 2018a; Schrepf et al., 2018).

The MAPP study highlights that this is consistent with findings in other CP conditions. People who often report a history of abuse or neglect also tend to have COPC, particularly CPP, FM, and migraine (Hu et al., 2007; Nicol et al., 2016), and these patients are also more likely to present overlapping pain syndromes and comorbid mood disorders, such as depression, anxiety, or panic disorder, and with decreased quality of life scores (Lai et al., 2017; Nicol et al., 2016). Studies examining these comorbidities have studied the role of the hypothalamic-pituitary-adrenal (HPA) axis and

downstream neurohormonal signaling. With the programming of this hormonal axis occurring early in development, studies have demonstrated that the perception of neglect can permanently affect both the regulation and output of the stress response system, as well as its effects on nociceptive processing in the periphery (Burke et al., 2017; Eller-Smith et al., 2018; Heim et al., 2000; Mayson and Teichman, 2009; Melchior et al., 2022).

Research exploring both the innate and acquired immune systems suggests that chronic inflammatory changes in these systems may contribute to the development of CPP. Though results have been inconsistent, studies have demonstrated increases in levels of specific pro-inflammatory cytokines in adult women with endometriosis, dysmenorrhea, and IC/BPS (Till et al., 2019), and in a prospective study, Mu et al. (2018) found that elevation of another pro-inflammatory cytokine predicts the development of endometriosis. Other studies have explored the upregulation of specific cell receptors of the innate immune system present in both pain sensitization and major depression and that changes in the regulation of these receptors are related to negative emotional states (Till et al., 2019).

2. **Musculoskeletal**

In women, the pelvic floor comprises the striated muscle, ligaments, connective tissues, and nerves that support the bladder, uterus, vagina, and rectum and help these pelvic organs function. Myofascial tissue is the thin, muscular, fibrous connective tissue to strengthen muscles and bones. Viscera is the internal organs (e.g., bladder, bowel, vagina, vulva, urethra, uterus). Myofascial trigger points are “contraction knots, usually within a taut band of skeletal muscle or in the muscle fascia, that are painful on compression” (Hoffman, 2011, p. 344).

Pelvic floor dysfunction (PFD) is associated with CPP and previous sexual assault (Beck et al., 2009). There is a high incidence of PFD, particularly pelvic floor muscle (PFM) overactivity, characterized by increased hypertonicity, or resting tone, decreased relaxation capacity, and elevated tenderness and pain sensitivity associated with CPP (level 2 evidence) (Engeler et al., 2013; Faubion et al., 2012; Loving

et al., 2014; Postma et al., 2013). Previous sexual assault and co-occurring conditions with CPP, including IC/PBS, endometriosis, IBS-C, and CC, coexist with hypertonic, short, tight PFM. The reference to hypertonic, short, tight PFM differs from the “atrophied, weak, hypotonic PFM of normal length” (Hoffman, 2011, p. 344), recognized more with urinary and fecal incontinence but not usually painful.

Hoffman (2011) proposes hypothesized explanations for the multiple symptoms among patients with CPP. They include the interconnected relationships between the viscera, PFM or myofascial tissue, and the CNS to generate the multisymptomatic presentation of CPP. She explains that guarding tendencies, such as in a chronic stress response, provoke an “upregulation of sacral reflexes,” which leads to muscle tightening (p. 344). She proposes that myofascial triggers create hypertonicity by shortening the muscles, impacting bladder emptying. Because bladder emptying depends on bladder contracts, urinary urgency, frequency, and stress incontinence can result. FitzGerald and Kotarinos (2003) noticed that tight, hypertonic PFM that do not relax properly promote constipation and delayed voiding.

3. **Multidisciplinary and multimodal care for chronic pelvic pain**

A basic understanding of the biopsychosocial model supports the uptake over the last 15-20 years for the recommendation for multidisciplinary and multimodal care for CPP (Dun et al., 2015; Valovska, 2016). Multidisciplinary care involves healthcare collaboration from different disciplines to treat patients with CPP. Cognitive-behavioral and psychosocial therapies are recommended for CP and CPP patients (Cheong et al., 2014a; Loving et al., 2012). A goal is to learn cognitive-behavioral skills to increase awareness of one’s body, movement, pain, and relaxation experiences. During these learning processes, goals typically involve individuals discovering how to work with their bodies to minimize and cope with their pain (Dun et al., 2015). It involves “modifying the patients’ thoughts and beliefs about pain and working realistically to manage pain” (Dun et al., 2015, p. 3).

Pelvic floor physical therapy (PT) is a recommendation for women (and men) with CPP (Dun et al., 2015). A physical therapist is trained to diagnose and treat PFD, including pain. A pelvic floor PT reduces muscle tightness in the abdomen, vagina, hips, thighs, and lower back. Reducing muscle tightness facilitates pelvic floor relaxation, often reducing pelvic pain and supporting voiding (Weiss, 2001). Pelvic floor PT may include biofeedback, myofascial release/manual therapy/massage, transcutaneous electric nerve stimulation (TENS)/percutaneous tibial nerve stimulation (PTNS), stretching, physical exercise, and Mensendiek somatocognitive therapy (MST) (Loving et al., 2012).

For example, biofeedback teaches patients to sustain, strengthen, direct, or eliminate a body action or reaction. Biofeedback can help to manage constipation (which can influence pelvic pain) whereby an individual learns to reliably influence body responses, including those not usually under voluntary control, such as the smooth muscle, specifically, the internal and sphincter (muscular ring that surrounds the anal canal) (Chiarelli, 2008). Mensendiek somatocognitive therapy is a body-oriented therapy hybrid of physiotherapy and cognitive behavioral therapy (CBT) and received moderate quality support using GRADE criteria (Loving et al., 2012) and continues to receive positive outcomes (e.g., reduced pain intensity) (Danielsen et al., 2021; Kaarbø et al., 2022; Nygaard et al., 2020).

Cognitive behavioral therapy and acceptance and commitment therapy (ACT), focusing on consciously connecting muscle movement, and working with the body to relax, supports a mind-body approach.

D. **Gaps and Opportunities**

1. **Health equity: Embracing social justice research**

Health equity frameworks offer social justice-oriented processes toward interpersonal violence and trauma prevention and early intervention. However, it is an underutilized lens to address the intersections of violence, health, and intergenerational patterns within societies, communities,

families, interpersonal relationships, and individuals. Table X defines Jones' (2014) conception of health equity as a process and an outcome (p. S74).

Bowleg (2019) explains that conceptually public health draws from critical perspectives in the pursuit of health equity research, including ecosocial theory (Bailey et al., 2017; Krieger, 2005, 2008b, 2011, 2014, 2016, 2019), critical race theory (Ford and Airhihenbuwa, 2010); intersectionality (Bowleg, 2012, 2021; Hill Collins and Bilge, 2016), and levels of racism (Jones, 2000). However, the use of these theoretical frameworks in CPP research is limited. Bowleg (2019) identifies methodological limitations in public health corresponding to these critical perspectives, limiting public health theory, research, and interventions. I identified many of the same gaps in my CPP and interpersonal violence literature review. Table XI lists Bowleg's (2019) recommended priorities for the *American Journal of Public Health (AJPA) Perspectives from the Social Sciences*.

TABLE X
CONCEPTUALIZING HEALTH EQUITY

Health equity as a process	<p>"a process of assurance of the conditions of optimal health for all people which requires at least three things:</p> <ol style="list-style-type: none"> 1) Valuing all individuals and populations equally 2) Recognizing and rectifying historical injustices 3) Providing resources according to need" (Jones, 2014, p. S74). <p>Health equity will eliminate health disparities (Jones, 2014, p. S74).</p>
Health equity as an outcome	<p>"Health equity is achieved when every person can attain their full health potential without disadvantage because of social position or other socially determined circumstances" (Jones, 2014, S74).</p>

(Jones, 2014, p. S74)

a. **Embodiment theories**

At the heart of the matter, research on CPP is missing health equity and social epidemiological approaches toward understanding the role of interpersonal violence, such as *ecosocial*

TABLE XI.
RECOMMENDED PRIORITIES FROM *THE AMERICAN JOURNAL OF PUBLIC HEALTH* PERSPECTIVES ON THE SOCIAL SCIENTISTS (BOWLEG, 2019, p. 15-16)

<ol style="list-style-type: none"> 1. Critically engaging with public health theory, research, and interventions 2. Emphasizing strengths and assets 3. Advancing multi-level and structural interventions 4. Promoting ethical and mutually beneficial community-researcher partnerships 5. Abandoning race as an independent explanatory variable and improving the conceptualization of socioeconomic variables (e.g., socioeconomic status, socioeconomic position, class) 6. Feature diverse and underrepresented methodologies and methods: <ul style="list-style-type: none"> • <i>Qualitative methods</i> offer in-depth insights into understudied phenomena, populations, or experiences: phenomenology, discourse analysis, and ethnography that critically engage with public health theory, research, and interventions. • <i>MMR</i>: Reflect the fidelity of this distinct approach by integrating quantitative and qualitative methods at one or more stages (s) of the research process • <i>Quantitative methods</i>: innovative analyses involving intersectionality, such as the effects of social processes on groups (between and within) at different intersections of power; intensive longitudinal data; and hierarchical models to address multi-level effects. • Social media methodological focus, regardless of method. • Active voice, instead of passive voice (used in post-positivist traditions to demonstrate objectivity and shield agency).
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(Bowleg, 2019, p. 15-16)

theory, a critical public health equity framework conceptualized by leading social epidemiologist Dr. Nancy Krieger (2019). The cornerstone of ecosocial theory is embodiment as a construct and process. To breakdown the complex and dynamic ecosocial theory, I begin by introducing Krieger's embodiment construct:

- "How we literally embody, biologically, our lived experience, in societal and ecological context, thereby creating population patterns of health and disease" (Krieger, 2011, p. 215).
- Consistent with ecological perspectives, understanding disease distribution requires ecological analyzing it in a "dynamic context" and awareness that the "socially-structured causal links between exposures and outcomes can vary over time and space" (Krieger, 2011, p. 216).

- Although biological differences exist between groups (e.g., females and males?), group relations, instead of intrinsic biology, can casually impact the health status between population groups (Krieger, 2011, p. 216).
- Given that peoples' biology and societal interaction shape biological processes, the ecosocial theory requires a higher level conceptualization of analyses, including comparisons between social groups (i.e., men, women, non-binary, privileged, and not privileged) (Krieger, 2011; 2019).
- "We live embodied:" Organisms, as members of populations, interact with the environment (not genes). These interactions affect gene regulation and expression and change the environment (Krieger, 2011, p. 222).
- "Embodiment... is active and reciprocal... that emphasizes our bodily engagement (soma and psyche combined), individually and collectively, within the biophysical world and each other" (Krieger, 2011, p. 222).

Brady et al. (2019) explain that life course epidemiology conceptualizes embodiment as "extrinsic factors experienced at different life stages are inscribed into an individual's body structures of functions" (p. 1189). This definition is helpful to conceptualize how embodiment is affected over one's life span. Embodiment is a primary, integrating concept in the *Society-Behavior-Biology Nexus* conceptual model developed by public health scholars Glass and McAtee (2006). It characterizes the shaping of "internal biological systems that occur because of prolonged exposure to environments. It is how features of social and built environments become internalized" (Glass and McAtee, p. 1655); how it gets "under the skin" (Taylor et al., 1997, p. 411). Geronimus's (1992) "weathering" term is similar to allostatic load, cumulative biological changes in the body resulting from ongoing exposure to social adversity.

What sets Krieger's model apart from these corresponding models? The ecosocial theory focuses on embodiment as a construct and as a process that is rooted in the current and historical socio-political economy and ecology that produces racial, gender identity, sexual orientation, classist injustices, in other words, racism, classism, sexism, heteronormativism, ableism, and other "isms" (Krieger, 2019). The socio-political economy and ecology are characterized by economic processes of production, reproduction, exchange, and interaction at every level of the ecosystem – global, national, regional, area, neighborhood, household, and individual, across time –the historical and intergenerational context. In *Measures of Racism, Sexism, Heterosexism, and Gender Binarism for Health Equity Research: From Structural Injustice to Embodied Harm—An Ecosocial Analysis*, Krieger (2019) makes health injustices explicit experienced as resulting from racism, sexism, heterosexism, and gender binarism.

Racism. Sexism. Heterosexism. Gender binarism. Each of these seemingly abstract terms encompasses is, very real and intimately harmful and distinct societal systems of self-serving domination and privilege (Beckerfield, 2018; Grusky and Hill, 2018; Hill-Collins and Bilge, 2016) that are created by people and structure health inequities (Krieger, 2014)—that unjust, unnecessary, and preventable differences in health status between social groups (Braveman and Gruskin, 2003; Krieger, 2003) (cited in Krieger, 2019, p. 4.2).

Krieger (2011) encourages public health scholars to apply ecosocial theory to investigate and illuminate the root causes and embodied pathways producing health inequities in population health. By exploring and examining embodiment and its conjoined constructs: (a) pathways of embodiment, (b) cumulative interplay of exposure, susceptibility, and resistance, and (c) accountability and agency, as proposed by Krieger, public health scholars can uncover the clues of current and changing population patterns of health inequities (2011). Table XII defines the ecosocial theory embodiment constructs.

Krieger (2019) identifies pathways of embodiment that are relevant to "unjust isms" (p. 47) that involve adverse exposure (e.g., social trauma, including discrimination and other forms of psychological, physical, and sexual trauma).

TABLE XII.
KRIEGER'S (2011) FOUR COJOINED EMBODIMENT CONSTRUCTS IN ECOSOCIAL THEORY

Construct	Description
(1) Embodiment	How we literally embody, biologically, our lived experience in societal and ecological context, thereby creating population patterns of health and disease (Krieger, 2011, p. 215).
(2) Pathways of embodiment	How processes of embodiment are shaped simultaneously by histories of social arrangements of power and property and by constraints and possibilities of our biology in an ecological context, involving gene expression and not just gene frequency (Krieger, 2019, p. 47).
(3) Cumulative interplay of exposure, susceptibility, and resistance across the life course and across levels	Accounting for the individuals' life course social and biological development and the historical generation in to which they have been born, levels at which the exposures—and susceptibility and resistance to these exposures—are occurring (i.e., global, national, regional, area, or group, household, individual) (Krieger, 2019, p. 47).
(4) Accountability and agency	Refers to both (a) The institutions and persons responsible for generating or perpetuating health injustices and (b) The public health researchers for the theories used to explain or ignore these injustices (Krieger, 2019, p. 47).

(Krieger, 2011, p. 215; 2019, p. 47)

In addition to the embodiment as conceptualized in ecosocial theory, it is widely used across many disciplines to explore the “lived body,”; that is, the equal and interconnected mind and body, each a source of knowledge (Merleau-Ponty, 1962; Csordas, 1994; Howe, 2003; Luanne Teall, 2015). Krieger advocates for quantitative studies to measure embodiment pathways and the conjoined constructs. However, in many of these other disciplines, qualitative methods are preferred. The following offer embodiment conceptualizations that lend themselves to qualitative or MMR: “the trauma can literally become embodied, manifesting as poor mental health and physical health outcomes in descendant generations” (Walters et al., 2011, p. 183). In *Oppression and the Body: Roots, Resistance, and Resolutions*, Caldwell and Bennett Leighton (2018) explore stories that our bodies share, the silencing of our bodies, and the threats and oppression facing particular peoples and bodies.

b. **Systems thinking: Ecological and community conceptualizations of resilience and healing**

A goal of community health science, a subfield of public health, is to increase structural and social opportunities (also referred to as the structural drivers and SDOHs) for health and wellness *across* social ecologies –where people live, learn, work, play, and pray. Growing support for local knowledge is grounded in communities’ lived experiences and meanings. Without these goals, studies often lack external validity and miss multi-level prevention and health promotion opportunities. The lack of systems thinking, in general, in the CPP literature is a significant limitation in the ability to conceptualize and organize health prevention and promotion planning. In sum, the collected CPP knowledge disconnects from place and community, the social-ecological context. It is instead generalized, a value of post-positivist epistemology. The samples do not represent the diverse and intersectional U.S. population and the experiences people encounter daily. Conducting health research, particularly of an oppressive and enduring nature, such as violence, without a systems perspective (meta-theory) or an interest in local social ecology and regard for intersectional communities and identities limits external validity and the ability of public and community health to translate relevant knowledge for and with local communities.

The ecological perspective derived from ecosystems theory from community psychology offers an interpretative framework for understanding lived experiences within people’s social ecologies. It can improve external validity for health promotion and prevention planning (Trickett, 2019). It complements community-based participatory research (CBPR) and community-engaged research (CER). Systems theory perspectives, such as community psychology’s use of the ecological perspective, underscore that the research process is a set of relational experiences amidst and joining the complex, dynamic, and interdependent ecosystem.

Ecological perspectives see “mind and world, as well as body and environment, as mutually overlapping, or as poles of a unity” (Fuchs, 2005, p. 115)). They are well-suited for phenomenological exploration (Fuchs, 2005). Scholars that maintain a long history of investigating social-ecological conceptualizations of resilience are from community psychology, human development, critical and antiracist feminism, and indigenous research. Feminist community psychologist Harvey (2007) defines resilience through a social-ecological lens as

a multidimensional phenomenon and process. A trauma survivor may experience impairment in one or more domains typically impacted by trauma and yet express strengths in other domains. A survivor may also be able to express strengths in some domains in order to secure recovery in other domains (p. 22).

Resilience is a dynamic process with a contextual nature. The process involves effects that vary with changing circumstances and development transitions (Harvey and Tummala-Narra, 2007).

Individual resilience cannot occur without social-ecological interdependencies and negotiations (Ungar, 2008, 2013). According to Ungar (2008), resilience is the capacity of individuals to navigate to the psychological, social, cultural, and physical resources that sustain their well-being and their capacity individually and collectively to negotiate for these resources to be provided and experienced in culturally meaningful ways. Resistance to the effects of trauma depends on the “child’s informal and formal social networks to facilitate positive development under stress” (Ungar, 2013, p. 255).

Public health literature, particularly practice-oriented, recognizes the need to identify and leverage societal, institutional, and interpersonal-level resources to increase resilience at every level. For example, a definition of community resilience offered by Norris et al. (2008) is

a process linking a network of adaptive capacities (resources with dynamic attributes) to adaptation after a disturbance or adversity. Community adaptation is manifest in population wellness, defined as high and non-disparate levels of mental and behavioral health, functioning, and quality of life (p. 127).

Explorations of community healing are present in Indigenous knowledge scholarship (Linklater, 2014; Ramirez, 1998), African-centered scholarship (Chioneso et al., 2020), and Black Feminism (Jones,

2015; Lorde, 2007), yet overall, the body of literature is minimally present in public health and health science. Chioneso et al. (2020) define community healing as “an ongoing multilevel process whereby oppressed groups strengthen their connectedness and collective memory through culturally syntonetic processes in ways that promote critical consciousness to achieve optimal states of justice” (p. 100).

The multilevel process combines justice, a process, and an outcome at the core of community healing. Culturally syntonetic (i.e., storytelling and resistance) work together to surface behaviors and ideas into action.

Ramirez (1998) explores a vision of community healing through the American Indian Holocaust. Historical trauma from the death, the scattering, the torture, and the rape of the American Indian holocaust experience could be healed through images, grieving, Indian-oriented history, and ceremony. The annual exhibit acts as a sacred space to decolonize knowledge, reimagine culture and community, and transform existing social relations to make a world where Indian people can belong (p. 305).

Jones (2014) brings attention to Black feminist-centered therapeutic models as a “sacred healing space” (p. 246) for mental health treatment for Black women. Such spaces iterate the changed consciousness of individuals, and the social transformation of political and economic institutions is pertinent for all women's mental health and social change.

Crystal Light Shines Through You, a poem by *Women in Shadow and Light: Journeys from Abuse to Healing* (Goff-LaFontaine, 2005), gives a glimpse of how a collective of women who engaged in participatory action research (PAR) collectively characterized their journeys from abuse toward healing.

No one can stop you from sharing your light
 You've always had the power
 But now you magnify your own Inner Self
 Your heart expands
 With love overflowing with courage

The contentment you experience is the fruitful yield
 Of your own cultivation
 Perseverance, tolerance, self-restraint, firm conviction, steadfastness
 All of those qualities

You have delved so deeply
 There is no one who can tell you who you are
 You know yourself
 No question

And now you illuminate the world
 Your relationships shine with honesty
 Lies are for the darkness

Out of the Shadows
 No one defines you
 Your imperfections are also stellar marks
 Refracting the light into diverse colors
 You are a crystal
 Purified through intense pressure
 Now beautifully revealed

Untouchable/Unchangeable/Unending Infinite.
 Shine!
 Out of the Shadows
 Shine! (p. 17)

Their poem highlights sources and expressions of strength, growth, and healing interacting among the individual and interpersonal levels. The community-level undertone is implicit in the collective development of this poem. Qualitative and mixed methods health promotion and prevention research challenges researchers, stakeholders, and allies to see and articulate multiple occurring phenomena-- pain, dysfunction, growth, healing, and resilience. These phenomena do not necessarily occur independently from one another.

Community healing contrasts with more mainstream conceptualizations of healing, which focus on the self, frequently with social support and spirituality—recovering or restoring a sense of wholeness and connection after experiencing suffering and illness (Meza and Fahoome, 2008; Scott et al., 2017). “The human experience of self-discovery and transformation that results in the sense of being whole and connected” (Meza and Fahoome, 2008, p. 356). Scott et al. (2017) conducted in-depth interviews with 23 patients who experienced healing and found that developing safe, trusting relationships and positive reframing helped support the weight of responsibility to the ability to respond. The analyst

team describes that each contextual factor (i.e., personal characteristics, the timing of their initial or ongoing wounding in the developmental life cycle, and previous and current relationships) facilitates the extent and nature of the suffering experienced. They present the healing journey as a bridge from suffering to healing resources, skills, and connections to “helpers” outside themselves, beginning with persistence and evolving safety and trust. The emergence of a new state of being forms after iterations between suffering and building resources and connections, characterized by hope, self-acceptance, and helping others, leading to a sense of integrity and meaningful purpose over time.

The historical literature trail shows that as awareness of the root causes of interpersonal violence grows, and more scholars and practitioners advocate for health equity lenses and praxis, the window of opportunity for research, health promotion, and prevention in ecological resilience and healing, community, and collective healing opens. Researchers, planners, and collaborators can better understand the community and interpersonal-level mediators and moderators facilitating resilience, healing, and overall health. For example, limited scholarly research on informal social networks, social movements and activism, and restorative justice related to health, well-being, healing, restoration, and resilience exists, especially for women with CPP. A gap in the CPP research is the lack of studies investigating strengths or asset-based phenomena. I did not locate studies on resilience or healing conceptualized from social-ecological perspectives, community, or individual levels. Instead, studies primarily focus on individual risk or associated factors (i.e., pain catastrophizing, anxiety, depression, PTSD, co-occurring CP conditions, and bladder, bowel, and sexual dysfunction) or coping.

Researching resilience and healing as captured by this selected fundamental literature necessitates CBPR principles, emphasizing asset-based approaches, humility, openness, power-sharing, and qualitative or MMR research approaches centering on lived experience. Researchers cannot expect people who have lived under systems of oppression, foregrounding gender, specifically Black, Indigenous, immigrants and refugees, undocumented, LGBTQ2s+, other women of color, and women

with disabilities, to share their tools for survival. Learning is a privilege and a responsibility, particularly around community or collective healing. I will speak more about this in Chapter IV, Aim 1.

2. **Transdisciplinary science and inclusion of insider knowledge**

To my knowledge, my dissertation work is the first community health science contribution to transdisciplinary, insider knowledge interpersonal violence-CPP research. I take a transdisciplinary approach, emphasizing health equity. Interdisciplinary and transdisciplinary team science is pertinent to public health and community health sciences in advancing social epidemiological research and pragmatic development and implementing equitable multilevel health promotion and prevention activities. Interdisciplinary science is scholars from at least two academic disciplines working together for shared results (Defila and Di Giulio, 2015). My three aims are transdisciplinary because of the holistic, comprehensive lens.

Transdisciplinary research aims to integrate multiple ways of knowing into all stages of the research process (Defila and Di Giulio, 2015). The integration process involves developing common answers to shared research questions by integrating, from the very start, the findings from the different disciplines and/or fields of practice involved in the research. The expected result is the integrated knowledge produced in this process, called the ‘synthesis’ (Defila and Di Giulio, 2015). The transdisciplinary approach is set apart from interdisciplinary works because it integrates “non-academic knowledge”—in other words, experts include people with knowledge from their lived experiences (Defila and Di Giulio, 2015, p. 123).

Lived experience research utility is insider knowledge, a concept from ethnography (Ellis and Adams, 2014). Insider knowledge is recognized in community health sciences as necessary for better understanding phenomena and social-ecological conditions affecting specific communities and developing and implementing health promotion and prevention activities—critical functions of translational research and implementation science within public health. Insiders or members of a

community have different kinds of knowledge than will strangers or outsiders. This knowledge does not mean it is complete, more truthful, or better than other knowledge generated. Outsiders may observe taken-for-granted beliefs, behaviors, and insights and ask different questions. Rather, *insiders* can discuss everyday experiences, perceptions, and meanings, including their identity, intentions, and motivations, which are inaccessible to observe (Ellis and Adams, 2014).

A social justice approach toward the positionality of insiders is a standpoint. Standpoint theory originated in feminist epistemology as “a sense of being engaged in revealing” what is hidden in the lives of oppressed social groups in order “to see” (Hartstock, 1998, p. 107). Its ways of knowing and otologies work to uncover the social and political structures, including power dynamics, that build the conditions in which oppressed groups live their daily lives (Hartsock, 1998). Hartsock (1998) describes these societal or material life conditions as including visions for which people, particularly oppressed groups, should achieve. Thus, people in oppressed groups must struggle to achieve these imposed social ideals. Hartstock (1998) argues that science and education hold significant agency and accountability to achieve these visions. It “... requires both sciences ‘to see’ beneath the surface of the social relations in which all are forced to participate, and the education which can only grow from struggle to change those relations” (p. 107-108). Phenomenologists and existentialists describe the “gaze” concept (Sarte, 1943). It is explored by critical theorists, sociologists, psychoanalysis, and media analysis, to essentially refer to individual or collective awareness and perceptions of other individuals, other groups, or oneself. References to shift the gaze (or to see) refers to shifting the standpoint toward the lived experiences, perspectives, and meanings of people whose knowledge remains hidden, from explicit or implicit actions to silence or repress.

Over the past few decades, CBPR surfaced as a transformative paradigm in public health and called translationally and implementation sciences to develop, implement, and disseminate effective interventions across communities to redress power imbalances; facilitate mutual benefit among the

community and academic partners; and promote reciprocal knowledge translation, incorporating community theories into research (Wallerstein and Duran, 2010). Community-based participatory influenced community-engaged CER approaches for clinical and health science research that align closer to their research questions and aims. Transdisciplinary teams find utility in CBPR and CER. Table XIII presents a table created by Wallerstein and Duran (2010).

Transdisciplinary science is complex and requires patience; self-reflexivity; personal and collective discipline; team and self-critique; and continued openness to differences across epistemological and ontological preferences, worldviews, processes, methodologies, analysis, interpretation, writing, and dissemination practices (Defila and Di Giulio, 2015, p. 129).

F. **Conclusion**

I attempt to fill the theoretical and methodological gap to promote survivors' voices through safe and collaborative praxis to enter the interdisciplinary and transdisciplinary science spaces exploring CPP and interpersonal violence. I propose a conceptual organizing research framework, an Anti-Oppressive Praxis for Community Health Equity Trauma Research (Chapter IV, Aim 1). I apply this framework to problematizing the research problem in the study of CPP and interpersonal violence (Chapter I and Chapter IV, Aim 1), addressing gaps in the literature (Chapter I), and developing a mixed methodology to study healing and resilient ecologies among survivors of interpersonal violence with CPP (Chapter IV, Aim 2) and to support the rationale for developing guidelines with co-researchers for trauma awareness in interactions with participants and collaborators (Chapter IV, Aim 3).

TABLE XIII.
HOW COMMUNITY-BASED PARTICIPATORY RESEARCH ADDRESSES
THE CHALLENGES OF TRANSLATIONAL RESEARCH

Challenge of Translational Research	How CBPR Addresses the Challenge
External Validity	Engages community stakeholders in adaption within complex systems of organizational and cultural context and knowledge.
What is the evidence: the privileging of academic knowledge	Creates the space for postcolonial and hybrid knowledge, including culturally supported interventions, indigenous theories, and community advocacy.
Language: incompatible discourse between academia and community	Broaden's discourse to include lifeworld cultural and social meanings.
Business as usual within universities	Shifts power through bidirectional learning, shared resources, collective decision-making, and outcomes beneficial to the community.
Non-sustainability of programs beyond research funding	Sustains programs through integration with existing programs, local ownership, and capacity development.
Lack of trust	Uses formal agreements and sustains long-term relationships to equalize partnership and promote mutual benefit.

(Wallerstein and Duran, 2010, pp. S42-S44)

III. ECOSOCIAL CONTEXT OF CHRONIC PELVIC PAIN AMONG SURVIVORS OF INTERPERSONAL VIOLENCE THEORETICAL FRAMEWORK

A. The Purpose

In the *AJPH Social Science Perspectives*, Bowleg (2019) calls for the increased application of critical public health theory to advance health equity research. In Figure 2, I actualized the Ecosocial Context of Chronic Pelvic Pain among Survivors of Interpersonal Violence theoretical framework. The framework guides multilevel community health equity promotion and prevention thinking, research, planning, implementation, and evaluation. The relationships between interpersonal violence and CPP, like other health inequities, are complex and interact bidirectionally within the nested hierarchical social-ecological levels and the multiple biological systems.

The construct and process of embodiment help explore the complex and dynamic impact of interpersonal violence, trauma, intergenerational trauma, and the interactions with resilience and healing within a person, relationship, family, and community— the whole person and its effect on the whole community or family.

B. Framework Adaptation

I adapted my conceptual framework from ecosocial theory (Bailey et al., 2017; Krieger, 2005, 2008b, 2011, 2014, 2016, 2019; Krieger et al., 2013, 2015) the World Health Organization's (WHO's) conceptual framework for action on the structural and social determinants of health (SDOH) (Solar and Irwin, 2010), and social-ecological perspectives of public health (Bronfenbrenner, 1977; Golden and Earp, 2012; Salli and Owen, 2015). The Prevention of Lower Urinary Symptoms (PLUS) Conceptual Framework informed my development process and output (Brady et al., 2018). The PLUS Framework (Brady et al., 2018) combined the WHO's conceptual framework for action on the structural and SDOH (Solar and Irwin, 2010), social-ecological frameworks of public health (Bronfenbrenner, 1977; Golden and Earp, 2012; Salli and Owen, 2015), and the Society-Behavior-Biology Nexus (Glass and McAtee, 2006) to

investigate the constraining and facilitating factors contributing to bladder health across the life course among adolescent and adult females (Brady et al., 2018). Social-ecological models (SEMs) relating to interpersonal violence supported my framework development (Campbell et al., 2009; Carlson et al., 2019; Dahlberg and Krug, 2002; Danielson and Saxena, 2019).

C. **Orientation to the Ecosocial Context of Chronic Pelvic Pain among Survivors of Interpersonal Violence Theoretical Framework**

The ecosocial context situates the CPP and interpersonal violence inequities or injustices by *intersectional socially constructed groups* at the center of the theory or the investigation, depicted by the shaded-red oval presenting five darker shaded-red ovals: (1) racial/ethnic injustice; (2) gender + sexuality injustice; (3) age injustice; (5) disability injustice; (6) class injustice. Recognizing the injustices involves identifying whether health inequities (within and across social categories) exist at a population-level distribution of disease. These categories reflect ecosocial theory (Krieger, 2019, p. 4.10, fig. 1.).

Depicted by the vertical turquoise rectangle, the embodiment construct is a construct and process are an analytical tool for exploring embodiment itself and its three related constructs: (b) pathways of embodiment, (c) cumulative interplay of exposure, susceptibility, and resistance, and (d) accountability and agency (See Table XIII for definitions). The ecosocial theory originated these four conjoined constructs (Krieger, 2019, p. 4.10, fig. 1.).

The investigation pursues understanding embodiment dynamics within the ecosocial context. How do the socially structured exposures associated with interpersonal violence and CPP become embodied and shape health outcomes (e.g., CPP, psychosocial correlates, function, and recovered or healed states of being)? I shaded the related constructs in a blended array of turquoise, pink, blue, and purple to emphasize the embodied fluidity and dynamic expressions within the ecosocial context.

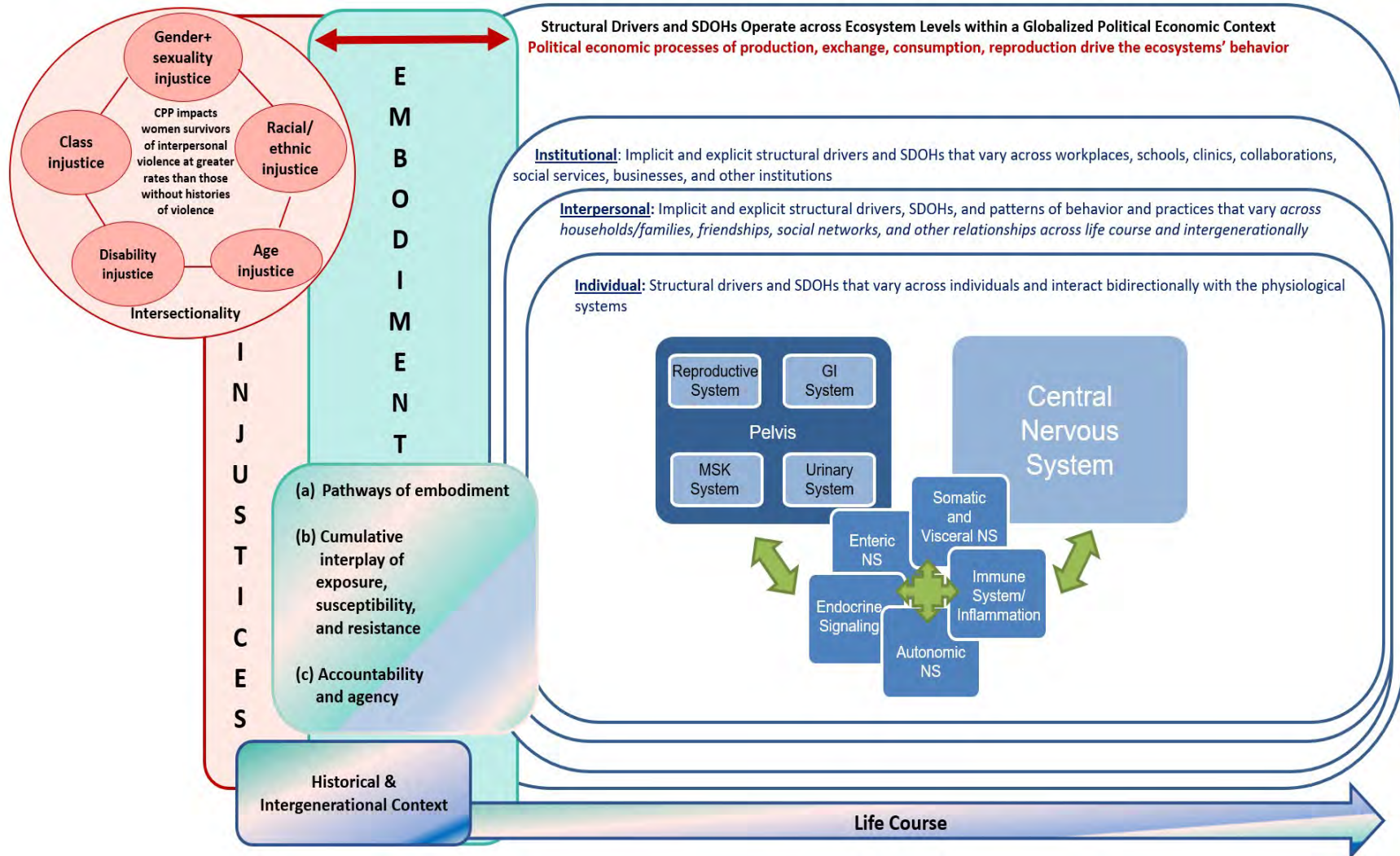


Figure 2. The Ecosocial Context of Chronic Pelvic Pain among Survivors of Interpersonal Violence theoretical framework

The ecosocial context involves,

- (i) *political, economic processes of production, exchange, consumption, and reproduction influencing socio-political and ecological levels* (i.e., societal, institutional, interpersonal, and individual levels). I selected to use these standard social-ecological levels instead of those represented in Krieger's ecosocial theory (global, national, regional, area, household, and individual [Krieger, 2019, p. 4.10, fig. 1]) to align with popular public health theories, including prevention and health promotion models. However, at each level, I indicate that these social-ecological levels occur globally, nationally, regionally, and locally to emphasize the political and economic processes of production, exchange, consumption, and reproduction that drive the ecosystems' behavior. All the possible structural drivers and SDOHs involved in each social-ecological level are represented in Figure 3 and listed in Table XIV.
- (iii) The blended shaded arrow represents the *life course*.
- (iv) Blended shaded horizontal rectangle nestled with life course and the embodiment constructs indicate *historical and intergeneration contexts*.

1. **Historical and intergenerational context**

The historical and intergenerational context includes intergenerational and historical trauma (HT). Intergeneration trauma recognizes collective trauma events, such as HT, interpersonal violence, and trauma cycles across family generations, including natural disasters, pandemics, and famine (Walters et al., 2011). Historical context is critical when considering groups of people who experienced HT, conceptualized as

an event or set of events perpetrated on a group of people (including their environment) who share a specific group identity (e.g., nationality, tribal affiliation, ethnicity, religious affiliation) with genocidal or ethnocidal intent (i.e., annihilation or disruption to traditional lifeways, culture, and identity (Walters et al., 2011, p. 181).

For example, American Indians and Alaska Natives (AIANs) throughout North America have suffered tremendous HT. For AIANs, cumulative HT events coincide with high rates of current lifetime trauma, interpersonal violence, and chronic stressors (e.g., microaggressions and daily discrimination experiences) (Chae and Walters, 2009; Walters et al., 2011). Researchers investigating interpersonal violence should be aware of HT because certain groups impacted by interpersonal violence carry HT. Intergenerational trauma differentiates from HT. The intention of HT is “upon a particular group for social, cultural, ethnic, or political decimation or annihilation” (Walters et al., 2011, p. 10). In contrast, this is not the intention of intergenerational violence (Walters et al., 2011).

Ungar (2013) describes how resilience moderates trauma impacts, linking the individual and family levels of trauma exposure to the social, physical, and built environment.

Experiences of trauma and the dysfunction that follows is, therefore, a reflection of both the individual’s experiences of horizontal (chronic, over the life course) and vertical (acute, time-limited) stressors as well as the socio-historical context in which the child’s navigations and negotiations for resources occur” [an element of resilience] (Ungar, 2013, p. 259).

2. Social-ecological levels

The social-ecological levels are represented in nested, hierarchical boxes by society, institutional, interpersonal, and individual. SEMs are frequently used in public health to map risk and protective factors or facilitating and constraining factors that might affect health more accurately. They investigate interactions between the community and the physical, social, and political environments and are used to chart possible health promotion and prevention activities (Israel et al., 2003; Salli and Owen, 2008; Wallerstein and Duran, 2003). In Figure 3, I added factors that Campbell (2009) identified in understanding IPV and mental health following sexual assault.

3. **Social determinants of health framework and the prevention of lower urinary tract symptoms conceptual framework**

I integrated the SEM levels with the WHO SDOH Framework. I referenced the PLUS Conceptual Framework to integrate and describe the SEM and SDOH constructs. The SDOH Framework describes how social, economic, and political factors, such as public policies (i.e., health, housing, and education), affect the socioeconomic positions of people in communities. These disparities in individuals' socioeconomic positions, in turn, determine the distribution of specific determinants of health (e.g., living and working conditions, stress) that subsequently and directly impact individual differences in health and well-being. Based on people's "respective social status, individuals experience differences in exposure and vulnerability to health-compromising conditions" (Solar and Irwin, 2010, p. 5). Illness or disability, in turn, can affect a person's social standing and thus diminish employment and educational opportunities (Solar and Irwin, 2010). Within this framework, structural mechanisms lead to "stratification and social class divisions in the society and define the individual socioeconomic position within hierarchies of power, prestige, and access to resources" (Solar and Irwin, 2010, p. 5).

Structural determinants or drivers of health inequity (Solar and Irwin, 2010) are the social, political, and economic policy factors that determine the inequitable distribution of the determinants of health available to different communities (i.e., tax, labor, education, zoning, and immigration policies). The structural drivers that lead to the SDOH are the factors related to the conditions of daily life, such as the circumstances in which people are born, live, work, and age, including housing conditions, nutrition, and educational and employment opportunities. They are related to broader factors, such as policies and economics. The underlying SDOH interacts through intermediary determinants (i.e., material conditions, psychosocial circumstances, behavioral and biological factors, and the health care system itself) (Solar and Irwin, 2006, 2010).

As displayed in Table XIV, I identified many facilitating (protective) and constraining (risk) SDOHs associated with interpersonal violence, resilience, healing, and CPP. I categorized them by structural drivers and intermediaries at each social-ecological level. I referenced Wilkins et al. (2018) for much of this table development. A subscript denotes the SDOHs to cite the source at the end of the table.

Next, I mapped the selection of facilitating and constraining determinants associated with interpersonal violence, resilience, healing, and CPP onto the Ecosocial Context of Chronic Pelvic Pain among Women Survivors of Interpersonal Violence theoretical framework (Figure 3). The mapping exercise presents one use of the framework. It depicts what is possible to explore and examine embodiment within an ecosocial context. It is not a comprehensive list and can be modified to include or omit determinants. As the social epidemiological study of interpersonal violence and CPP advances, the investigators should adjust the factors to reflect each level's most reliable and valid determinants.

TABLE XIV
SPECIFIC IDENTIFICATION AND DESCRIPTION OF STRUCTURAL DRIVERS AND
INTERMEDIARY SOCIAL DETERMINANTS OF HEALTH IN THE ECOSOCIAL CONTEXT OF CHRONIC PELVIC PAIN
AMONG SURVIVORS OF INTERPERSONAL VIOLENCE THEORETICAL FRAMEWORK

SOCIETAL	
<p>The structural drivers of SDOH are interacting at the <i>global, national, regional, and area levels via political economy (i.e., processes of production, exchange, consumption, and reproduction) across history, intergenerationally, and the life course</i>, including the following:</p> <ul style="list-style-type: none"> • Governance, • Distribution of resources, • Macroeconomic policies, • Foreign policies, • Social policies (i.e., labor market, housing, land, education, health, incarceration, family, substance use, climate change) • Culture and societal values (i.e., gender norms/roles ^a; “victim-blaming” ^f; acceptance of “rape myths” ^f; acceptance of physical punishment of wives/children ^a; gender attitudes toward IPV, harassment, SA ^a; police misconduct and inequitable police responsiveness to communities ^a; mental health, chronic pain, and substance use disorders [SUD], work/productivity/competitive culture) • Environmental pollutants and effects of climate change, i.e., natural disasters, extreme temperatures • Political violence • War 	
INSTITUTIONAL	
<p>The implicit and explicit structural drivers and social determinants vary across workplaces, schools, clinics, partnerships/collaborations, public and social services, CBOs/CSOs, businesses, and others <i>globally, nationally, regionally, and locally via political economy (i.e., processes of production, exchange, consumption, and reproduction), across history, intergenerationally, and the life course</i> including the following:</p>	
Structural drivers of SDOH	Intermediary determinants of SDOH
<ul style="list-style-type: none"> • Distribution of resources, • Policies, • Patterns of behavior, • Organizational practices and processes, • Power dynamics and practices (i.e., racism, sexism, classism, ageism, heteronormativity, seniority; harassment, bullying) • Organizational culture/norms/values (i.e., institutional racism ^f, differences in responding to SA ^f, acceptance of “rape myths”) • Police misconduct/brutality and inequitable police responsiveness to communities ^a 	<ul style="list-style-type: none"> • Housing stability and affordability ^{a, d} • Working conditions • Food (in)security • Safe or unsafe parks/green and blue spaces; access (or limited access) to affordable health care, mental health, and social services, daycare • community violence • neighborhood disadvantage ^{a/} community disruption <ul style="list-style-type: none"> • social disorganization (i.e., residential mobility, residential instability or stability, population density, racial or ethnic heterogeneity, and social and physical disorder) • neighborhood low social cohesion/low levels of trust ⁱ • neighborhoods with high unemployment and low economic activity ^j

TABLE XIV
SPECIFIC IDENTIFICATION AND DESCRIPTION OF STRUCTURAL DRIVERS AND
INTERMEDIARY SOCIAL DETERMINANTS OF HEALTH IN THE ECOSOCIAL CONTEXT OF CHRONIC PELVIC PAIN
AMONG SURVIVORS OF INTERPERSONAL VIOLENCE THEORETICAL FRAMEWORK (Continued)

INTERPERSONAL	
<p>The implicit and explicit structural drivers of SDOH (similar to the structural drivers at the other levels), social determinants of SDOH, and patterns of behavior and practices vary <i>across families, friendships, social networks, and other relationships across the life course and intergenerationally</i>, including the following:</p> <p>Intermediary determinants of SDOH:</p> <ul style="list-style-type: none"> • Interpersonal violence/exposure to violence ^{b, d, m} • Family conflict (i.e., violence between parents, low-income family management) ⁿ • Youth peer association (neg) ^o • Youth peer association (positive)/social support ^q • Safety • Trust (see social capital); low trust ⁿ • Accumulated stress/allostatic load ^a • Lack of social support/social isolation ^a • positive social reactions support after disclosure of sexual assault • negative response after disclosure of sexual assault ^f • Parent(s')/caregiver(s') pain exposure and reactions from birth ^b • Mother separation during childhood ^b • Parent(s')/caregiver(s') attachment style 	
INDIVIDUAL	
<p>Structural drivers of SDOH</p> <p>The socioeconomic position depends on the following structural determinants:</p> <ul style="list-style-type: none"> • Income (i.e., income inequality ^a; poverty ^d) • Educational opportunities ^r • Gender identity and sexual orientation (i.e., wage and occupation inequality, hate crimes, bullying, harassment, GBV) • Experienced racism, discrimination ^d (i.e., racial residential segregation, discriminatory voting policies, loan and mortgage discrimination, and exclusion, police brutality, hate crimes, bullying) • Experienced stigma ^f • Occupation • Experiences with physical and mental disabilities ^f • Lack of opportunity, mobility, and social capital ^{d, n} 	<p>Intermediary determinants of SDOH:</p> <ul style="list-style-type: none"> • Catastrophizing (maladaptive cognitive and emotional coping response involving rumination on and amplification of pain symptoms, exhibiting feelings of hopefulness and pessimism or more accurately defined as a distress response) • Problem-solving skills • Emotional self-regulation • Lack of non-violent coping skills and low levels of behavior control/impulsiveness ⁿ • History of violent victimization ^m • Witnessing violence ⁿ • Mental health challenges ^{f n}

TABLE XV
SPECIFIC IDENTIFICATION AND DESCRIPTION OF STRUCTURAL DRIVERS AND
INTERMEDIARY SOCIAL DETERMINANTS OF HEALTH IN THE ECOSOCIAL CONTEXT OF CHRONIC PELVIC PAIN
AMONG SURVIVORS OF INTERPERSONAL VIOLENCE THEORETICAL FRAMEWORK (Continued)

Mediators and Moderators between Structural Drivers and Intermediary Determinants of SDOH	<ul style="list-style-type: none"> • Resilience ^g • Social cohesion ^{c,h}, and collective efficacy • Social capital (i.e., trust ^c; social networks, social support ^p; resources ^c) • Rape crisis centers and other community mental health programs ^{e,i} • “Coordination of resources and services among community agencies” ^l (Wilkins et al., 2018, p. S34)
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^a Risk factors for violence (Armstead et al., 2019; Benson et al., 2004; Borg and Parker, 2001; Eckenrode et al., 2014; Guedes et al., 2016; Hatzenbuehler, 2011; Hipp, 2007; Kane, 2005; Kaylen and Pridemore, 2011; Klein, 2011; Krivo et al., 2009; Martinez et al., 2008; Wei et al., 2005; Wilkins et al., 2014; Wilkins et al., 2018).

^b Life-cycle risk factors associated with the development of chronic pain (Alshiek et al., 2011; Wuest et al., 2010).

^c Protective factors for violence (Klein, 2011; Lederman et al., 2002; Martinez et al., 2008)

^d “Adverse community environments” are associated with ACEs, *Pair of ACEs* (W. Ellis, 2020)

^e Protective factors for less distress post-sexual assault (Campbell et al., 2009; Ullman and Brecklin, 2003).

^f Risk factors for increased depression, anxiety, PTSD, or post-sexual assault create a sociocultural context that is difficult for survivors to recover (Campbell et al., 2009; Ullman and Brecklin, 2003).

^g Resilience moderated the impact of trauma symptoms related to depression (Wingo et al., 2010).

^h Social cohesion mediates the impact of exposure to violence and perceived neighborhood disorder on children (Gapen et al., 2011).

ⁱ Risk factors for multiple forms of violence are associated with neighborhood low social cohesion (Capaldi et al., 2012; Coulton et al., 2007; DeGue et al., 2013; Herrenkohl et al., 2007; Sampson et al., 1997).

^j Risk factors for multiple forms of violence are associated with high neighborhood unemployment and low economic opportunity (Acevedo-Garcia et al., 2003; Pinchevsky and Wright, 2012; Sampson et al., 2002).

^k Risk factors for almost all forms of violence are associated with norms supporting aggression or coercion (Álvarez-García et al., 2015; Briggs and Cutright, 1994; Jackson et al., 1999; Pinchevsky and Wright, 2012; Reeves and Orpinas, 2011; Reitzel-Jaffe and Wolfe, 2001).

^l Protective factors for lower levels of child abuse, neglect, and from violence at the community level (Basile et al., 2013; Borowsky et al., 1997; Browning, 2002; Campbell, 2009; Gross-Manos et al., 2022; Kennedy et al., 1998; Klevens et al., 2008, 2015; Pinchevsky and Wright, 2012; Widome et al., 2008; Wright and Benson, 2010).

^m Children, typically boys, who experience early life physical abuse or neglect at an increased risk for committing violence against peers (Johnson et al., 2002; Logan et al., 2009; Resnick et al., 2004), bullying (Duke et al., 2010), TDV (Duke et al., 2010; Hamby et al., 2012), committing child abuse (Pears and Capaldi, 2001), elder abuse (Johannesen and Logiudice, 2013), IPV (Ernst et al., 2009; Fulu et al., 2013), SV (Abbey et al., 2011, 2012; Fulu et al., 2013) later in life” (cited in Wilkins, 2018, p. S33).

ⁿ Risk factors for almost all forms of violent perpetration: witnessing violence (Álvarez-García et al., 2015; Black et al., 2001; Capaldi et al., 2012; Dube et al., 2001; Sousa et al., 2011; Tharp et al., 2013a; Vagi et al., 2013), lack of non-violent coping skills (Herrenkohl and Herrenkohl, 2007; Hong and Espelage, 2012; Lubell and Vetter, 2006; Schiamberg and Gans, 2000; Stith et al., 2009; Tharp et al., 2013b); mental health challenges (Casey et al., 2017; Fulu et al., 2013; Johannesen and Logiudice, 2013; Pears and Capaldi, 2001; Resnick et al., 2004; Russell and King, 2020; Tharp et al., 2013b; Vagi et al., 2013).

^o Risk factors for harming others through bullying, youth violence, TDV, later in life SV, IPV (see Wilkins, 2018, p. S34)

^p Protective factors from perpetration for individuals living in disadvantaged communities (see Wilkins, 2018, p. S34)

^q Protective factors from the perpetration of TDV, youth violence, and bullying (see Wilkins, 2018, p. 34)

^r Increased risk for almost all forms of violent perpetration associated with low educational achievement (Fulu et al., 2013; Herrenkohl et al., 2000; Hussey et al., 2006; Lubell and Vetter, 2006; Nansel et al., 2001; Vagi et al., 2013).

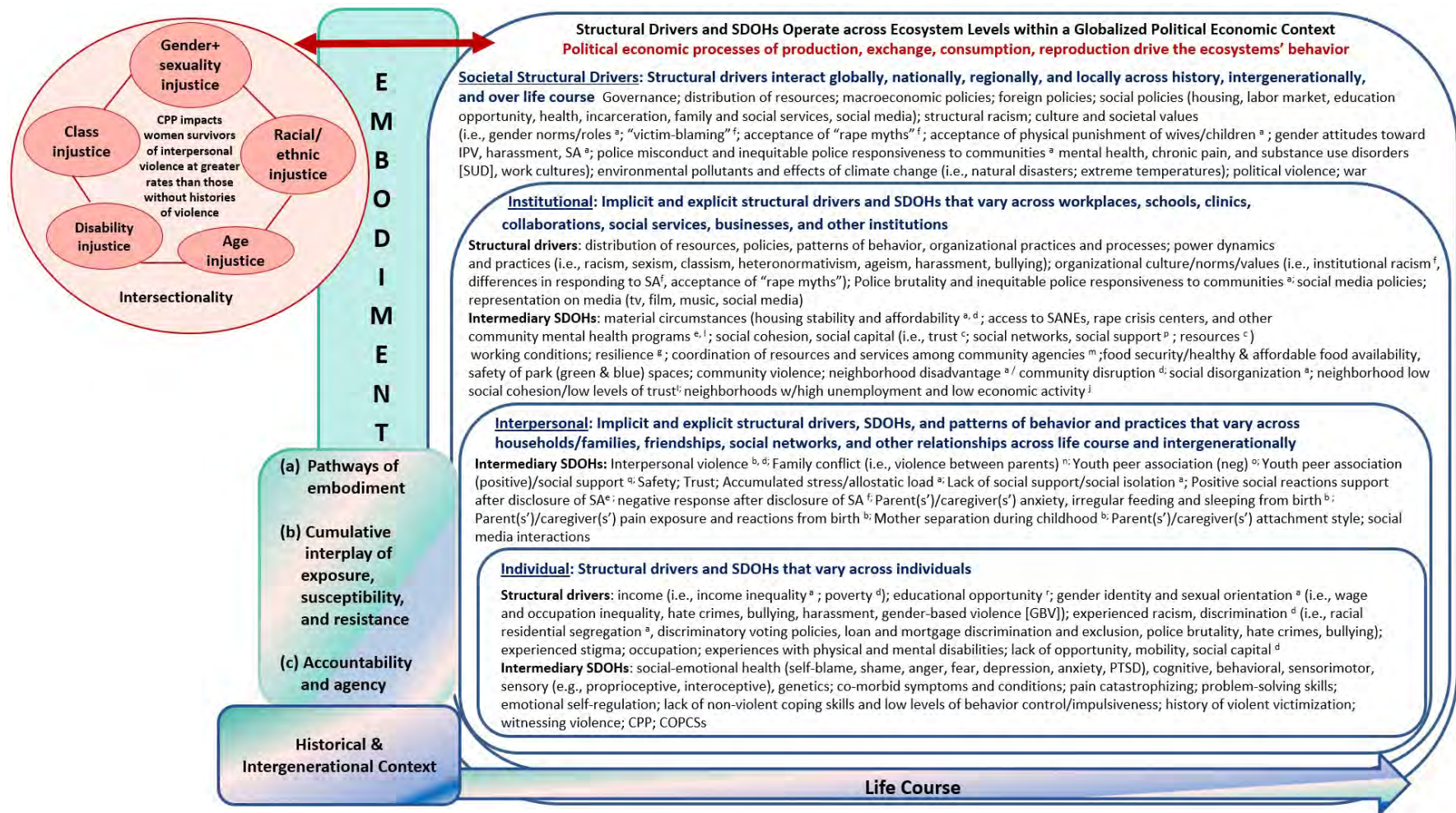


Figure 3. An application of The Ecosocial Context of Chronic Pelvic Pain among Survivors of Interpersonal Violence theoretical framework

IV. AIMS

My dissertation aimed to develop a theoretical and methodological framework for conducting health equity research in the transdisciplinary CPP and interpersonal violence research field. I proposed the following aims:

Aim 1 critically engages anti-oppressive epidemiological theory, praxis, and mixed methodologies to create an organizing research framework centered on the embodiment. The dissemination output of aim I is entitled, *Crafting an Anti-Oppressive Praxis for Trauma Research in Community Health Equity*.

Aim 2 is to develop a methodological study protocol, entitled, *Anti-Oppressive Convergent Phenomenological Mixed Methods Research Protocol: Healing and Resilience Experienced by Survivors of Interpersonal Violence with a History of Chronic Pelvic Pain in Chicago*.

Aim 3 is to engage in participatory explorative research with co-researchers, Trauma Informed Approaches (TIA) best practice literature, my archival field notes, and my reflexivity in informing guidelines for interacting with co-researchers and collaborators with trauma awareness in a research context. The dissemination output is entitled, *Participatory Development of Research Guidelines for Interacting with Co-Researchers, Participants, and Collaborators with Trauma Awareness*

A. **Aim 1: Craft an Anti-Oppressive Praxis for Trauma Research in Community Health**

1. **Aim 1**

Critically engage with anti-oppressive epidemiological theory, praxis, and mixed methodologies to create an organizing research framework focused on the embodiment. This framework combines research problem identification, knowledge production, relational processes, conceptualization, measurement, analysis, interpretation, and meta-theory using systems thinking.

2. Introduction

a. Call for critical perspectives and methodologies to advance health equity

Lisa Bowleg (2019), an associate editor of *the American Journal of Public Health (AJPH)*, wrote an editorial in *Perspectives from the Social Sciences*. She called for submissions for this section that included the following set of principles for advancing public health equity through critical perspectives in research and intervention: (1) Critical engagement with public health theory, research, and interventions—particularly the alignment and operationalization of critical theory (e.g., ecosocial theory, intersectionality, levels of racism, critical racism) with research methodology and interventions; (2) emphasizing strengths and assets; (3) advancing multi-level and structural interventions; (4) promoting ethical and mutually beneficial community-researcher partnerships; (5) abandoning race as an explanatory independent variable and improving the conceptualization of socioeconomic variables (e.g., socioeconomic status and class)—more theory and research is needed on how to better conceptualize, measure, and analyze socioeconomic variables at the individual, household, and neighborhood levels; and (6) diverse and underrepresented methodologies and methods, including more rigorous qualitative research that critically engages with public health theory (e.g., detailed methodologies and analytical strategies that offer demonstrate novel or in-depth insights into understudied phenomena, experiences, or populations, as well as qualitative methodologies underrepresented in the United States (i.e., phenomenology, discourse analysis, ethnography, and photovoice) (pp. 14-15). For MMR to withhold its design integrity, researchers should integrate quantitative and qualitative data at multiple phases of the research process (Bowleg, 2019, pp. 15-16). Ford and Airhihenbuwa (2010) provide a conceptual framework for applying critical race theory (CRT), highlighting applying intersectionality to public health research.

b. **Need an organizing research framework for community health to study trauma and embodiment**

Population patterns demonstrate that experiences of violence, particularly multiple types of violence, can affect child development and disproportionately impact adult health (CDC, 2016; 2019; Niolon et al., 2017). There is a significant lack of theoretical perspectives and research on critical health equity in the interdisciplinary literature investigating interpersonal violence and CPP and CP. To address this gap, I reviewed the public health literature on interpersonal violence, trauma, and health outcomes.

First, I drew on Krieger's (2005, 2008, 2011, 2019; Krieger et al., 2013) ecosocial theory, a prominent social epidemiological theory. Ecosocial theory recognizes that policies, institutions, and power dynamics produce oppression, social inequalities, and health inequities that manifest in the distribution of disease (or wellness) across different populations (Bailey et al., 2017; Krieger, 2008a; 2011, 2014, 2016, 2019; Krieger et al., 2013, 2015). Embodiment is the unifying construct of ecosocial theory. It necessitates a more integrated multi-level approach than the social-ecological model (SEM) (Krieger, 2005, p. 352). Ecosocial theory underscores the significant contributions of its embodiment construct to social epidemiology. Essentially, peoples' bodies tell the stories of the conditions of their lives and their interactions within their environments and conditions; to see and understand people's health and disease, separate from their conditions and interactions within the place, space, life course, and history, is missed opportunity and leads to epidemiological misunderstanding (Krieger, 2005, p. 352). Krieger (2005) identifies *physical and sexual abuse*, discrimination, food insecurity, social and economic poverty, inadequate health care, and inadequate sanitation as some of the conditions that "leave marks on the body" (Krieger, 2005, p. 350). In contrast, conditions such as living wages, societal support for childcare, pensions, safe workplaces, healthy cities, protection, and promotion of human rights correlate with wellness (Krieger, 2005, p. 350). "From population patterns of health, disease, and

well-being, it is possible to discern the contours and distribution of power, property, and technology within and across nations over time. Or...from the conditions of our bodies... you can gain deep insight into the workings of the body politic" (Krieger, 2005, p. 350). See Chapter III for a complete description of ecosocial theory.

I did not locate a study using ecosocial theory to understand CPP. However, Krieger's (2019) recent *AJPH* article presents "key specific and shared features of unjust *isms*: core beliefs about targeted versus privileged groups, biology, and health status" (pp. 4.1-4.4) to support researchers in setting up their research questions and designs using ecosocial theory. The isms are structural treatment exposures relating to health inequities. Krieger (2019) encourages researchers to query: How particular forms of "unjust treatment exposure" are connected to what "types of harmful biophysical and social phenomena, at what point in the life course, with what type of etiologic periods, and with what potential for intergenerational harm" (p. 4.4). I inventoried literature that used ecosocial theory to measure or explore interpersonal violence and health. I examined the root causes of interpersonal violence, including structural dynamics related to policies, institutions, power relations, sexism, racism, classism, ableism, heteronormativity, and ageism. In addition, I explored the characteristics of the embodiment processes that lead to the disproportionate health outcomes that many survivors face throughout their lives.

Given the lack of exploratory and empirical research conducted or published in this area based on critical ecosocial theory, I broadened my search to include structural drivers and the SDOH framework. The experience of violence is an adverse health outcome caused by overlapping structural factors and SDOH across the social ecology (Armstead et al., 2019; Wilkins et al., 2018). Gaps in CPP and interpersonal violence, as well as much of the literature on interpersonal violence and public health, include a lack of focus on survivors' lived experiences and meanings, CBPR, CER, and a strengths-based

approach, and limited application of ecosocial theory and intersectionality. Instead, researchers have situated the problems at the individual and interpersonal levels and taken a deficit-based approach.

Many researchers in the social sciences, including gender and women's studies, black feminism, feminist urban geography, urban studies, community psychology, urban planning, sociology, and human development, explore and examine structural-social causes of violence. I studied much of their work, moving back and forth between ecosocial theory, interpersonal violence, and CPP research. I focused on identifying and connecting the formulation of the research problem while attending to systems of oppression, intersectionality, and the social construction of gender, race, class, and sexual orientation. I also concentrated on a strengths-based orientation; critical and pragmatic theory; relationships and interactions among researchers, collaborators, and study participants; conceptualization and measurement; and analysis and interpretation. Finally, I considered a systems perspective that views research processes as "events in systems" that can contribute positive ripple effects, including groundwork for health promotion, prevention planning, partnerships, and unintended consequences (Trickett and Beehler, 2017). I developed an organizational research framework that led to the Anti-Oppressive Praxis: Community Health Equity Trauma Research (CHET-Research).

This article aims to present the Anti-Oppressive Praxis: CHET- Research, introduce readers to the diversity of perspectives involved, describe the methodology used to create it, and apply it to address the gaps identified in the literature on CPP and interpersonal violence.

c. **Defining key terminology**

The WHO defines violence as "the intentional use of physical force or power threatened or actual, against oneself, another person, or against a group or community, that either result in or have a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation" (Krug et al., 2002, p. 5). Interpersonal violence occurs between individuals, subdivided into (1) family and IPV and (2) community violence. Interpersonal violence involves many forms and subtypes

of violence, including ACE, CM, CSA, IPV (also known as DV), TDV, and elder abuse. Acquaintance and stranger violence consists of youth violence, stranger assault, property crime, and workplace and other organizational violence (Dahlberg and Krug, 2006; Krug et al., 2002). Substance Abuse and Mental Health Services Administration (2014) defines individual trauma as

results from an event or series of events, or set of circumstances that is experienced by an individual as physically or emotionally life-threatening threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being. (p. 8).

Chioneso et al. (2020) define racial trauma as "real and perceived danger, threats, witnessing harm, or humiliating and shaming events to ethnoracial individuals like the self that may be sudden, beyond their control, and emotionally overwhelming" (p. 96).

Pain (2021) compares three different conceptualizations of gender-based violence (GBV) and the trauma it causes. The first is the isolation of the survivor, which takes various forms, including physical, psychological, social/material, and discursive. The perpetrator creates and exploits the trauma and denies access to support. The second concept is collective trauma from Black feminism and post-colonial scholarship to describe structural trauma that is inherently communal. A collective conception of trauma understands the trauma that GBV manifests as the exploration of the "collective aspects of experiencing, surviving and rebuilding from GBV, and resonances and discontinuities" (Pain, 2021, p. 1). A third concept is that of *commoning*, which originated in urban studies. Pain (2021) utilizes commoning to capture the diverse experiences of GBV better and focus on the "mutual aid in resistance to violence" (p. 1788). Commoning offers an alternative perspective on the collective features of GBV: Experiencing, surviving, and rebuilding from GBV (p. 1802). While a shared reality of GBV is harm, death, isolation, and loss of safe spaces and social networks, commoning seeks to understand the collective ways of organizing and living that resist isolation (Pain, 2021, p. 1801). For example, interventions for trauma often overlook women's existing strengths and agency, a structural form of isolation and harm (Tseris,

2013). Despite the isolating GBV reality, cooperative daily care activities work together to resist resisting violence and its impacts (Pain, 2021; Raynor, 2021).

3. **Background**

a. **Theoretical framework**

I drew on the Ecosocial Context of Chronic Pelvic Pain in Survivors among Interpersonal Violence theoretical framework (see Chapter III) to address the research problem of interpersonal violence and CPP from a community health equity perspective. This research developed into the Anti-Oppressive Praxis: Community Health Equity Trauma Research (CHET-Research). Key constructs include intersectionality, embodiment, and pathways of embodiment. Other concepts include exposure, susceptibility, resistance across the life course and levels, and accountability and agency. The construct of accountability and agency refers to the "institutions and persons responsible for generating or perpetuating health injustices and the public health researchers for the theories used to explain or ignore these injustices" (N. Krieger, 2019, p. 47). Therefore, I applied accountability and agency to problematize the role of the researcher when engaging with communities experiencing health and social inequities, as well as the processes and decisions associated with knowledge production and dissemination.

b. **A mixed methods research best practice**

MMR best practices support the development of an organizational framework for research. Hesse-Biber (2010) explains that in MMR research, epistemology, ontology, methods, and decisions in interpreting and analyzing data guide the research question development. The researcher's choices and assumptions are interconnected. The best practice of MMR is to increase the transparency of the process (Hesse-Biber, 2010).

4. **Methodology**

I integrated methods of synthesis and analysis. First, as described in Chapter II, over the past decade, I have engaged with the evolving research and discourse in five major literature areas: (1) trauma and recovery; (2) interpersonal violence occurring at multiple levels of the SEM, intervention, and prevention approaches; (3) chronic pelvic pain and related bowel and bladder dysfunction; (4) public health theory, including social epidemiological theory; and (5) participatory, qualitative, and MMR.

I refined my study of the literature to the following topics: (1) chronic pelvic pain and related pelvic-area symptoms and conditions and chronic overlapping pain conditions (COPC), including biopsychosocial models and pathophysiology of CPP; (2) interpersonal violence from public health and social epidemiological perspectives, including health equity; (3) trauma, oppression, recovery; (4) embodiment; (5) healing; (6) resilience; (7) anti-oppressive epistemological positions, including Black feminism, indigenous scholarship, critical theory, critical feminism, anti-racism, and Freirean pedagogy of the oppressed; (8) social epidemiological models: ecosocial theory, life course theory, social determinants of health inequities, socioecological models and perspectives; (9) phenomenology; (10) community-based participatory research (CBPR); and (11) MMR.

The approach to the literature synthesis is displayed in Figure 4 below. It maps the iterative, synergistic, and reflexive process of the literature synthesis and critique. I used multiple data analysis and interpretation techniques in this iterative literature review. First, I read the literature multiple times, memoed, and coded data, following the best practices of qualitative methodology. Then, I created glossaries of terms and compared definitions. Next, I tracked prevalence rates and compared them across social groups before interpreting and comparing theoretical models and constructs. Finally, I aligned the research questions with the theoretical constructs. The scholarly literature in many of these

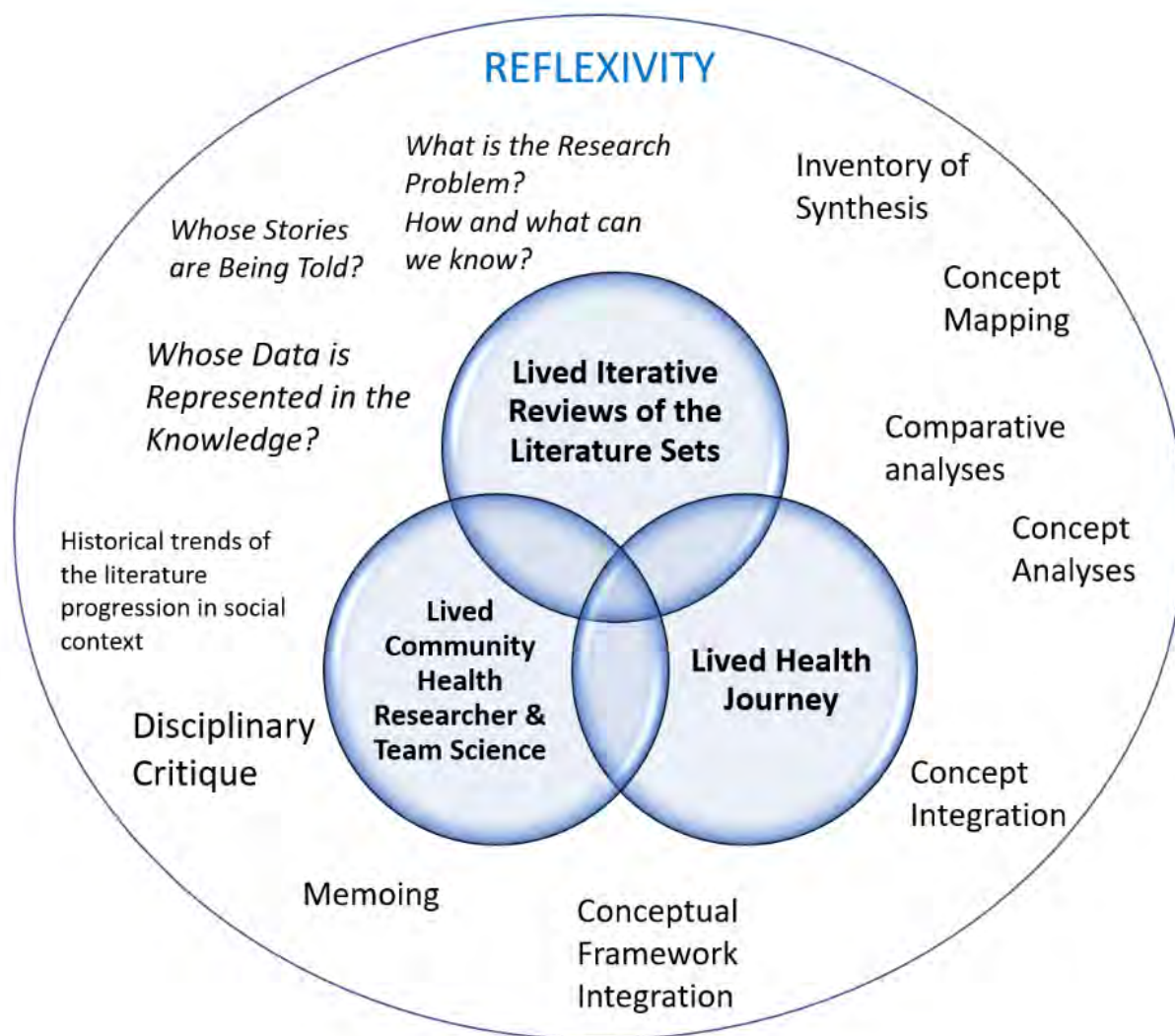


Figure 4. Approach to the literature synthesis

areas have increased dramatically in the last five years. Given the rate at which new research generates, I have not reached data saturation. The analysis and interpretation techniques encompass my lived experiences spanning ten years: (1) lived iterative review of the literature sets, (2) lived health journey, and (3) lived community health research. In addition, I engaged in continuous reflective practices to support validation and reliability. Overall, I interrogated the role of public health in advancing health equity as a process and a goal, focusing on the health inequities influenced and perpetuated by interpersonal violence.

I drew on the case example of the relationship between CPP and interpersonal violence, using analytical and interpretive techniques from the "inventory of synthesis" methodology for transdisciplinary science (Defila and di Giulio, 2015, p. 128). I engaged in discourse analysis to identify the epistemological and ontological underpinnings of the research problem (Bowleg, 2017; Willig, 2013). In addition, my techniques included reflexivity (Hesse-Biber, 2010; McHugh, 2014; Mauthner and Doucet, 2003; Strega and Brown, 2015; Strickler, 2019) and concept analysis (Hupcey and Penrod, 2005) to support my literature synthesis, critique, gap, and opportunity identification. However, the primary focus is to present Anti-Oppressive Praxis: Community Health Equity Trauma Research (CHET-Research).

5. **Results**

The result is the creation of the Anti-Oppressive Praxis: Community Health Trauma Research—an organizing research framework, displayed in Figure 5.

a. **Purpose of the anti-oppressive praxis for community health equity trauma research framework**

The purpose of the organizing research framework is to support my future work and potentially other researchers in designing complex community health equity studies and praxis that address trauma and healing. The goal is to promote synergy and collaborate strategically throughout the research process and through anti-oppressive praxis, focusing on community health promotion and

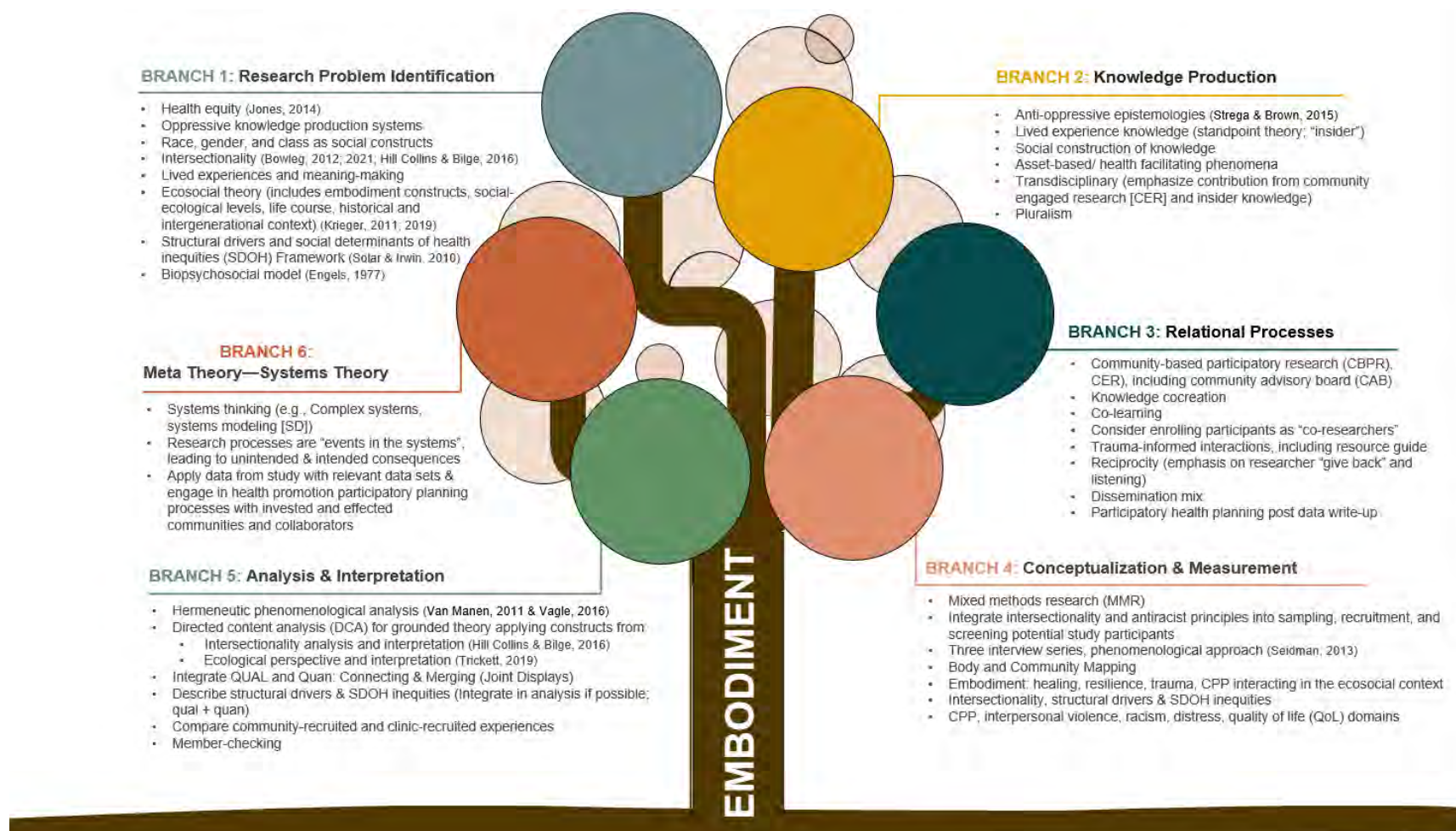


Figure 5. Anti-Oppressive Praxis for Community Health Equity Trauma Research--a conceptual organizing framework.

This framework could serve as a foundation for other research on the intersections of health and trauma to guide problem formation, development of study aims, MMR methodologies, and thinking through systems implications. It centers embodiment as dynamic, influencing, and being influenced across time and the research process. The framework twines together (Branch 1) research problem identification, (Branch 2) knowledge production, (Branch 3) relational processes, (Branch 4) conceptualization and measurement, (Branch 5) analysis and interpretation, and (Branch 6) meta-theory—systems thinking.

prevention planning. This framework links the research problem identification (Branch 1), knowledge production (Branch 2), relational processes (Branch 3), conceptualization and measurement (Branch 4), analysis and interpretation (Branch 5), and meta-theory—systems thinking (Branch 6). The framework centers on embodiment as dynamic, influencing time, space, and the research process. It comprises a collection of theories and practices and seeks synergy and interaction between complementary and seemingly discordant paradigms and approaches. These theories and methods work to reveal embodied phenomena in people who have experienced trauma and healing in an ecosocial context that is difficult to capture using linear and individual approaches (Smith-Acuna, 2011). Drawing on a transdisciplinary practice, I have integrated theories from multiple disciplines and communities with insider knowledge.

b. **Description of the anti-oppressive praxis for community health trauma research framework**

As illustrated in the figure above, I selected the tree metaphor as an organizing research framework to address some limitations of the current embodiment, trauma, and health analysis. Trees symbolize growth, adaptation, and resilience. Wisdom is associated with trees. Just as a person's body reveals clues to their social context throughout life and historical context (embodiment), the tree offers multiple signals often focused on its trunk (the figure symbolizes the tree trunk for the construct and process of embodiment). For example, the number of rings tells us how old the tree is, while the paths of the roots show how it adapts to the surrounding physical and built environment. The branches and roots that extend from the trunk constantly negotiate over space, resources (e.g., water, sunlight), shifting weather, and climate with neighboring trees, wildlife, and human activities. The trunk stump represents resistance to being chopped or burned down, as does the image of a fallen tree.

Moreover, a tree is never truly alone. As a living organism, it is the sum of its parts—roots, branches, leaves, bark, and fungus are interconnected and work together. Depending on one's perspective, a branch, a family of branches, or leaves may come to the foreground while the entire tree

fades into the background. On the other hand, the tree is unified. Parts of the tree may be in a state of homeostasis, distress, recovery, or growth. The tree as a whole, however, often endures.

The tree is part of a complex, dynamic ecosystem comprised of shifting climate patterns, weather conditions, wildlife, and abundant human economic production. Likewise, a person or community may experience trauma and have parts of themselves or community life in homeostasis, distress, recovery, or growth states. Sometimes the whole may appear unaffected but fragmented parts remain. For some, healing means moving toward a renewed whole. For others, progress toward recovery is the restoration or restorative justice of the ecosystem.

Anti-oppressive epistemologies aim to facilitate socially just research (Strega and Brown, 2015). They engage in research practice to center marginalized knowledge(s) and ways of producing knowledge (Branch 2). Indigenous scholars, feminists, and critical race theorists often question knowledge production (Behar, 1996; Jones, 2015; Linklater, 2014; Lorde, 2007; Ramirez, 1998; Strega and Brown, 2015; Tuhiwai Smith, 2012). For example, Strega and Brown (2015) pose the questions: Who is allowed to create meanings about the world? How are different meanings assigned to the status of knowledge? What role do the socially produced categories of race, gender, sexuality, geographic location, and socioeconomic status play in these claims? Furthermore, anti-oppressive praxis acknowledges that research processes operate within systems of oppression and identifies those that counteract these forces (Strega and Brown, 2015, pp. 23-25; 119-121).

Anti-oppressive epistemologies explicitly recognize the social construction of race, gender, class, and sexual orientation. Anti-racist research practice requires conscious engagement with race and other identities that intersect with race, suggesting, if possible, the elimination of the race measures as a proxy for the structural drivers and social determinants of health; instead, using *racism*, geographic location, housing, income, debt, and educational opportunity (Grant et al., 2021). Anti-oppressive praxis involves uncomfortable reflexivity and disciplinary critique, critical consciousness, intersectionality, a

focus on asset-based phenomena, and the engagement of study participants as co-researchers and opportunities for co-learning (Strega and Brown, 2015).

I combined an anti-oppressive praxis with a critical social-epidemiological lens of health equity: ecosocial theory, social determinants of health (SDOH), and social-ecological model (SEM), with a foundation in biopsychosocial processes and popular conceptualizations of embodiment ([Branches 1 & 2]; Engel, 1977; N. Krieger, 2019; Richard et al., 2011; Solar and Irwin, 2010). This integration aimed to review and critique the current literature examining health phenomena and primary trauma such as violence and facilitate the design of research studies from this combined perspective. One challenge in using these complex, dynamic, and comprehensive conceptual frameworks (in combination or individually) with qualitative or MMR is to narrow the scope and capture the complex, interdependent dynamic processes and phenomena.

A transdisciplinary team science approach presents opportunities to build a marginalized knowledge base and supplement mainstream knowledge (Branch 2). In other words, transdisciplinary team science can challenge systems of oppression and mainstream knowledge by engaging and privileging marginalized knowledge. The organizing research framework encourages community health researchers to collaborate with transdisciplinary teams investigating health, violence, trauma, or toxic stress phenomena. Community health scholars can influence transdisciplinary team science and advance marginalized knowledge when equipped with anti-oppressive principles and openness to the social construction of knowledge and pluralism. Community-engaged research practice, mixed methodologies, pragmatic participatory health promotion, and prevention planning with local stakeholders represent potential approaches and interventions.

I propose to incorporate the ecological perspective (Trickett, 1995; 2019) and intersectionality analysis (Hill Collins and Bilge, 2016) in conceptualizing, analyzing, and interpreting concepts of interest (e.g., resilience and healing). These approaches seek to mediate the tension between the broad,

comprehensive presentation of the research problem and individual-level lived experiences, perceptions, and meaning-making (Branch 4 and 5). The ecological perspective and intersectionality analysis are theoretical perspectives operationalizing community- and society-level phenomena. Principles of the ecological perspective include (1) interdependence, (2) cycling of resources, (3) adaptation, and (4) succession (Trickett, 1995, 2019). In addition, the ecological metaphor includes five main principles, or "the five C's": contextualist philosophy, community as a multi-level concept, culture and diversity as critical community-defining concepts, and collaboration (Trickett, 2019, pp. 207-208).

Hill-Collins and Bilge (2016) operationalize intersectionality for analysis in six domains: (1) social inequalities (layers of complexity), (2) power dynamics/relations, (3) relationality, (4) social context, (5) complexity, and (6) social justice. Their application to trauma survivors' qualitative experiential data as an interpretative framework illuminates community- and society-level characteristics and dynamics. While the unit of analysis remains at the individual level, using these interpretative frameworks to uncover social processes and dynamics of community life (in this example, related to healing and resilience) aids exploratory research.

The systems perspective serves as a meta-theory in this organizing research framework to contextualize the research process (Branch 6). Trickett produced a body of literature theorizing and empirically testing community interventions. First, the research process produces "events in systems" (Hawe et al., 2009, p. 270) accompanied by intended and unintended consequences that ripple across the setting (Hawe et al., 2009; Hawe and Riley, 2005; Trickett, 2019; Trickett et al., 2011). Following this logic, as community health researchers, we leverage structural and social opportunities for health and well-being. Therefore, an anti-oppressive research praxis aligns with these goals, particularly regarding how knowledge production is understood (Branch 2) and the actual relational processes (Branch 3) that occur during the research process with study participants, co-researchers, and collaborators.

I look to Freirean practice that uses the concept of embodiment to integrate the power of learning and voice into everyday activities and processes (Freire, 1970; Grace, 2003; Krieger, 2005; Krieger et al., 2013; Lorde, 2007; Piran et al., 2020; van Manen, 2016; Walters et al., 2011). Community-based participatory research set the gold standard and influenced innovative CER approaches. This all-highlight knowledge co-creation, reciprocity, power-sharing, earning, and building trust (Branch 3) and generally focus on place-based research (Wallerstein, 2018; Wallerstein et al., 2018; Wallerstein and Duran, 2010). For example, Hebert-Beirne et al. (2018) introduced transformative communication spaces for building trust among research partners and collaborative leadership.

Second, the systems perspective emphasizes research, translation, and application in a social context. Danielson and Saxena (2019) suggest using an integrated health equity model that combines the SEM, the SDOH framework, the lifespan perspective of the ACE pyramid, policy, systems, and environmental change strategies, and trauma-informed perspectives (p. 6).

Drawing on systems thinking as a meta-theory, I aim to situate the research in the place and local socioeconomic and political context to develop a dissemination mix (Branch 3) and participatory health promotion planning processes with co-researchers and collaborators (Branch 4).

6. Discussion

a. Applying the anti-oppressive praxis for community health equity trauma research framework to the study of interpersonal violence and chronic pelvic pain

A starting point for socially just or health equity research is to ask whose and what experiences are unrepresented in the CPP literature. A health equity stance mines the invisible. Anti-Oppressive researchers Strega and Brown (2015) challenge: Whose story it [research] can tell, but also whose story it will hide, why, for whom, and with what consequence? Who is permitted to create meanings about the world? How are some meanings and not others given the status knowledge? How

do race, gender, and class influence these privileges (pp. 23-25; 119-121)? Krieger (2019) is concerned with identifying the "explicit and tacit rules that codefine the social groups at issue and the polarities of superior/inferior and normal/deviant they encompass and clarifying not only who is harmed but who gains, socially and materially, from these divisions" (Krieger, 2019, p. 4.2). In the CPP literature, the experiences, perceptions, and meanings of survivors of interpersonal violence and CPP are often overlooked. However, this marginalized knowledge is essential to understanding the nature of CPP and its role in survivors' everyday lives. Recent findings characterize pain as part of the brain structure, as "both a sensory experience and an emotional response" (Till et al., 2019, p. 6). The perception of pain and physical well-being is integral to the CPP experience. How might a community health equity approach address the challenges of representation? I provide opportunities for a community health equity approach to address the problem of lack of representation in Table XV.

b. **Limitations**

The organizational framework of the Anti-Oppressive Praxis for Community Health Equity Trauma Research confronts reductive, post-positive research designs, and the culture of research implementation. A strength of this work is its commitment to complexity. At the same time, it is resource heavy to combine and implement comprehensive complex theory, rigorous qualitative methodology, and mixed-methods integration while emphasizing praxis.

A second limitation is transferability. I crafted the framework through a reflexive, iterative, critical review and synthesis of several large literature sets. Reflexivity and the "inventory of synthesis" supported my goal to stay open to several stances and evidence. Given my lived experience with the material for a decade, insider knowledge, and critical discourse approach, subjective interpretation of health equity and other literature sets is a reality, which may limit how other scholars conceive the literature. A third limitation is that I did not reach data saturation. Literature in all the sets is proliferating.

TABLE XV.
WHOSE AND WHAT EXPERIENCES ARE NOT REPRESENTED IN THE CHRONIC PELVIC PAIN LITERATURE?
HOW A COMMUNITY HEALTH EQUITY APPROACH MIGHT ADDRESS THE CHALLENGES OF REPRESENTATION

Absent from CPP literature: <i>Whose stories remain invisible?</i>	How a community approach to health equity might address the challenge with CPP research teams
a. People with a history of interpersonal violence, including ACEs, are affected by CPP...	<ul style="list-style-type: none"> • Appreciate that people who have experienced interpersonal violence (i.e., an ACE score of 4 or more, trauma, or PTSD) respond differently to their life experiences. Not all people develop trauma, PTSD, depression, or anxiety. In addition, they have different access to resources and safe relationships throughout their lives. • Question the root and ongoing causes of ACEs. Consider the utility of the <i>Building Community Resilience: Process and Readiness and Pair or ACEs Framework</i> (Ellis, 2020; Ellis and Dietz, 2017); <i>Connecting ACEs and Community Health to Promote Health Equity</i> (Danielson and Saxena, 2019); <i>ACEs and Life Opportunities: Shifting the Narrative</i> (Metzler et al., 2017). • Expand ACEs measures to include structural drivers and SDOHs, such as measures of exposure to community violence (Lee et al., 2017), witnessing violence, bullying, racism, and foster care (Public Health Management Corporation et al., 2013, p. 6). <i>Branch 2: Knowledge production (asset-based → community resilience); Branch 4: Conceptualization & measurement (See Chapter II and Chapter IV, Aim 2)</i> • Explicitly recognize in the research process and dissemination products that interpersonal violence is not just an individual or interpersonal factor but occurs at every social-ecological level. Dynamic, complex structures and patterns of power, policies, and interconnectedness influence it. It is an SDOH. <i>Branch 1: Research problem identification; Branch 5: Analysis and interpretation; Branch 6: Meta-theory—systems theories (See Chapter IV, Aims 1 and 2).</i> • Explore embodiment exposure, susceptibility, and resistance, embodiment pathways, accountability, and agency concerning interpersonal violence, trauma, resources, and healing in an ecosocial context, or at least in a social-ecological context and SDOH framework (see Chapter III) <i>Branch 1: Research problem identification; Branch 4: Conceptualization & measurement; Branch 5: Analysis & interpretation; Branch 6: Meta-theory—systems theories (Chapter IV, Aims 1 and 2).</i>

TABLE XV.
WHOSE AND WHAT EXPERIENCES ARE NOT REPRESENTED IN THE CHRONIC PELVIC PAIN LITERATURE?
HOW A COMMUNITY HEALTH EQUITY APPROACH MIGHT ADDRESS THE CHALLENGES OF REPRESENTATION (Continued)

Absent from CPP literature: <i>Whose stories remain invisible?</i>		How a community approach to health equity might address the challenge with CPP research teams
a.1	are not asked about their experiences, perceptions, and meanings;	<ul style="list-style-type: none"> Engage qualitatively, MMR, CBPR/CER, or critical researchers with insider knowledge or allies to assist in the creation of the study protocol, including interview guides and instruments, interactions and interviews with study participants or co-researcher participants, analysis and interpretation, writing, and dissemination teams. <i>Branch 2: Knowledge production; Branch 3: Relational processes; Branch 4: Conceptualization & measurement → study material development; Branch 5: Analysis & interpretation; Branch 6: Meta-theory—systems theories → ripple effects (Chapter IV, Aim 2)</i> Create trauma-informed guidelines for interactions and data collection with participants, co-researchers, and collaborators. <i>Branch 3: Relational processes; Branch 2: Knowledge Production → importance of insider knowledge; Branch 6: Meta-theory—systems theories → ripple effects (Chapter IV, Aim 3)</i>
a.2	Who have intersectional, socially constructed, and self-ascribed identities that cannot be reduced to and separated from any given social category;	<p>Collaborate with social scientists versed in intersectionality analysis to develop MMR methods. Recruit and enroll study samples with intersectional identities, measure and attend to all dimensions of intersectionality, including power dynamics, relationality, social justice, and complexity, and describe structural drivers and SDOH to refine the table of participant characteristics (Bowleg, 2008; 2012; 2021; Hill Collins and Bilge, 2016).</p> <p><i>Branch 4: Conceptualization & measurement; Branch 5: Analysis & interpretation (Chapter IV, Aims 2 and 3)</i></p>

TABLE XV.
WHOSE AND WHAT EXPERIENCES ARE NOT REPRESENTED IN THE CHRONIC PELVIC PAIN LITERATURE?
HOW A COMMUNITY HEALTH EQUITY APPROACH MIGHT ADDRESS THE CHALLENGES OF REPRESENTATION (Continued)

Absent from CPP literature: <i>Whose stories remain invisible?</i>		How a community approach to health equity might address the challenge with CPP research teams
a.3	are explored quantitatively across a long list of risk factors, with a limited understanding of facilitating factors. Therefore, the social-ecological understanding of resilience, recovery, and healing is unknown and not understood.	<ul style="list-style-type: none"> • Prioritize health-promoting experiences and perceptions to support factor identification and instrument development. <i>Branch 2: Knowledge production; Branch 3: Relational processes; Branch 4: Conceptualization and measurement; Branch 5: Analysis and interpretation</i> • Critique mainstream conceptualizations of resilience and healing. <i>Branch 1: Research problem identification; Branch 2: Knowledge production (Chapter IV, Aim 2)</i> • Awareness that Western approaches tend toward individually oriented definitions and operationalizations of resilience and healing, whereas indigenous peoples, for example, tend to experience collective healing (Linklater, 2014). <i>Branch 2: Knowledge production; Branch 3: Relational processes (Chapter IV, Aim 2)</i> • Consider social-ecological conceptualizations that emphasize the sources and expressions of resilience and healing (see human development scholar Ungar, 2011; 2013; 2018; 2021 and community psychologists Harvey, 2007; Harvey and Tummala-Narra, 2007). <i>Branch 4: Conceptualization and measurement (Chapter IV, Aim 2)</i> • Explore healing and resilience experiences and perspectives with CBPR, photovoice, art, or performance. <i>Branch 2: Knowledge production; Branch 3: Relational processes; Branch 4: Conceptualization & measurement; Branch 5: Analysis and interpretation</i> • Explore healing through an in-depth phenomenological approach to interviews and analysis to discover what constitutes different healing experiences across time and space (in other words, social ecology). <i>Branch 2: Knowledge production; Branch 3: Relational processes; Branch 4: Conceptualization & measurement; Branch 5: Analysis and interpretation; Branch 6: Meta-theory and systems theories (Chapter IV, Aims 1 and 2)</i> • Explore resilience or healing through an in-depth phenomenological and social-ecological approach to interviews and directed content analysis (DCA) to inform grounded theory. Use interpretative frameworks focused on identifying resources for resilience and healing and social-ecological dynamics (e.g., ecological metaphor/perspective, SEM, intersectionality analysis, community resilience, and healing perspectives). <i>Branch 2: Knowledge production; Branch 3: Relational processes; Branch 4: Conceptualization and measurement; Branch 5: Analysis and interpretation; Branch 6: Meta-theory—systems theories (Chapter IV, Aim 2)</i>

TABLE XV.
WHOSE AND WHAT EXPERIENCES ARE NOT REPRESENTED IN THE CHRONIC PELVIC PAIN LITERATURE?
HOW A COMMUNITY HEALTH EQUITY APPROACH MIGHT ADDRESS THE CHALLENGES OF REPRESENTATION (Continued)

Absent from CPP literature: <i>Whose stories remain invisible?</i> How a community approach to health equity might address the challenge with CPP research teams	
<p>a.4 who prioritize the basic needs of safety, housing, finances, school, work, and health care for herself and her family</p> <p>a.5. who identify as non-binary, genderqueer, and trans</p> <p>a.6. who experience disabilities</p> <p>a.7. who experience(d) homelessness</p>	<ul style="list-style-type: none"> Engage researchers with insider knowledge or allies in all parts of the research process. Increase sensitivity to communities' capacity to participate in research, potential distress, and methods to minimize re-traumatization. Follow CBPR best practices in collaborating with community-strengthening organizations (CSOs) to build and sustain relationships with communities. <p>Plan for an extended timeframe for recruitment, enrollment, and data collection. The study is not a priority in the lives of potential participants or CSOs.</p> <p>The research team requires patience, humility, flexibility, and adaptability.</p> <p><i>Branch 1: Research problem identification; Branch 2: Knowledge production; Branch 3: Relational processes; Branch 4: Conceptualization & measurement; Branch 5: Analysis & interpretation; Branch 6: Meta-theory—systems thinking</i></p>
<p>b. Absent from CPP literature: <i>Whose stories remain invisible?</i> How a community approach to health equity might address the challenge with CPP research teams</p>	<ul style="list-style-type: none"> Recruit and enroll from sub-specialty clinics, community health clinics/FQHCs, and community spaces. Engage community health researchers, CSOs, institutional CCTS/CTSAs, and relevant centers/initiatives for community capacity building and research collaboration on best CE/CBPR practices—study recruitment and retention as a byproduct of these intentional, relational processes rather than the sole focus. Prepare resources (i.e., staff hours and budget) for enhanced study recruitment and enrollment processes. <p><i>Branch 2: Knowledge production; Branch 3: Relational processes (Chapter IV, Aim 2)</i></p>
<p>c. What contributes to access and care continuity for women receiving appropriate CPP treatment and their healing and resilience?</p>	<ul style="list-style-type: none"> Recruit and enroll from sub-specialty clinics, community health clinics/FQHCs, and community spaces. Compare and contrast experiences across groups. <p><i>Branch 2: Knowledge production; Branch 3: Relational processes; Branch 5: Analysis and interpretation (Chapter IV, Aim 2)</i></p>

7. **Conclusion**

The Ecosocial Context of Chronic Pelvic Pain among Survivors of Interpersonal Violence is a critical public health theoretical framework adapted from ecosocial theory and includes intersectionality. It formed the basis for the literature review and analysis. This framework, along with Strega and Brown's (2015) elements for anti-oppressive research and Grant's (2021) anti-racist research principles, underpins The Anti-Oppressive Praxis for Community Health Equity Trauma Research organizing framework. I created this framework, focusing on women with intersectional lived experiences who are survivors of interpersonal violence, and subsequently developed CPP. The strengths-based and trauma-informed framework recognizes that trauma can be a reality for survivors but focuses on their healing and resilience within a social-ecological context. It prioritizes their lived experiences, meaning-making, roles as experts, and contributions to knowledge generation. The framework provides a strategic, modifiable roadmap for the research process as it connects the branches and cross-links the domains. It is comprehensive, cohesive, and an accountability tool that can be used as a "check-in" during protocol development, research, and evaluation.

I apply this framework to develop a rigorous methodology (see Chapter IV, Section B). The Anti-Oppressive Praxis for Community Health Equity Trauma Research could serve as a foundation or launching point for future research on the intersections of community health and trauma to guide problem formation, development of study aims, rigorous qualitative and MMR methodologies, prioritization of relational praxis, and thinking through systems implications. This working framework is well-suited for scholars interested in exploring embodiment at the local and community level, as well as sensitive and stigmatized topics such as traumatic experiences, CPP, bladder, bowel, sexuality, mental health, and challenging chronic health outcomes.

B. **Aim 2: Anti-Oppressive Convergent Phenomenological Mixed Methods Research Protocol: Healing and Resilience Experienced by Women Survivors of Interpersonal Violence with a History of Chronic Pelvic Pain in Chicago**

I apply the conceptual research organizing framework, Anti-Oppressive Praxis for Community Health Trauma Research (CHET-Research), to develop and describe a novel mixed methods research (MMR) protocol to study healing and resilience among survivors of interpersonal violence with a history of chronic pelvic pain (CPP).

1. **Introduction**

Lived experiences and perceptions play a vital role in trauma's development, severity, and progression (Substance Abuse and Mental Health Services Administration, 2014) and CPP experiences (Till et al., 2019). Recent evidence characterizes pain as “both a sensory experience and an emotional response,” and perceptions of pain and physical well-being are integral to the CPP experience (Till et al., 2019, p. 6). Despite this evidence, lived experience research exploring (dis)embodied trauma and strength-based phenomena of healing and resiliency among females who explicitly identify as survivors of interpersonal violence before CPP is missing in the CPP research. The lack of understanding prevents the exploration of the complex interplay of trauma experiences and CPP phenomena within the ecosocial context of interpersonal violence (See Chapter III to reference the Ecosocial Context of Interpersonal Violence and Chronic Pelvic Pain among Survivors Theoretical Framework). The context of interpersonal violence, CP and CPP, trauma, healing, and resilience is deeply entrenched in and dynamically shaped by embodied socio-political-cultural-economic-historical oppressive processes and patterns; thus, it limits the capacity to discover and pilot novel and transformative multi-ecological health promotion, prevention, and early interventions and to re-envision community health collaborations progressing health equity.

a. **Chronic pelvic pain overview**

Chronic pelvic pain is an underexplored and debilitating public health problem (Yosef et al., 2016). The most common definition across medical subspecialties of CPP is persistent pain in the pelvis lasting at least six months. It may or may not be associated with menstrual periods (As-Sanie, Kim, Napadow, et al., 2016; Cheong et al., 2014b). Chronic pelvic pain affects approximately 15% of women in the United States and between 5.7%-26.6% worldwide (Ahangari, 2014; Latthe et al., 2006). Worldwide CPP prevalence estimates among males are 2%-16% (Krieger et al., 1999). Chronic abdominal pain is widespread in childhood. Prevalence rates range from 0.3-19% in children attending school in the U.S. and Europe (Stein et al., 2017). Growing since the 1980s, a remarkable number of cross-sectional, self-report studies links CPP with forms of interpersonal violence, including sexual, physical, and emotional abuse and ACEs (As-Sanie et al., 2014; Beesley et al., 2010; Chiu et al., 2017; Cichowski et al., 2013; Drossman, 2011; Imhoff et al., 2012; Jundt et al., 2007; Kanuri et al., 2016; Korterink et al., 2015; Latthe et al., 2006; Leserman et al., 1996; Leserman and Drossman, 2007; Liebermann et al., 2018; Mark et al., 2008; Meltzer-Brody et al., 2007; Park et al., 2016; Poleshuck et al., 2005; Randolph and Reddy, 2006; Schliep et al., 2016; Volpe et al., 2020).

Female and male survivors of interpersonal violence, particularly ACEs, are disproportionately impacted by CPP and CP (Schrepf, Naliboff, et al., 2018). A history of interpersonal violence among women is 1.5-2 times the risk of conditions often involving CPP than those without interpersonal violence experiences (Till et al., 2019). Female adolescent and adult survivors of interpersonal violence experience CPP and CP symptoms disproportionately more and often more severely than females without histories of interpersonal violence (As-Sanie et al., 2014; Ayorinde et al., 2015; Heim et al., 2000; Mark et al., 2008; Nelson et al., 2012; Poleshuck et al., 2005; Schrepf, Naliboff, et al., 2018; Stein et al., 2017; Till et al., 2019). Women experience CPP symptoms two times more than males.

b. **Defining interpersonal violence and trauma**

Violence is defined as “the intentional use of physical force or power threatened or actual, against one, another person, or against a group or community, that either result in or have a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation” (Krug et al., 2002, p. 5). Interpersonal violence is between individuals subdivided into (1) family and IPV and (2) community violence. It involves many forms and subtypes of violence. Interpersonal violence encompasses ACEs, CM, CSA; IPV (also known as DV); TDV, and elder abuse. Acquaintance and stranger violence consist of youth violence, assault by strangers, violence related to property crimes, and violence in workplaces and other organizations (Dahlberg and Krug, 2006; Krug et al., 2002). Interpersonal violence is an adverse health outcome and is a social determinant of health (SDOH), meaning it influences the development of adverse health outcomes and behavior (Healthy People 2030, 2022) (refer to Chapter II). It is considered a traumatic event, or exposure SAMSHA (2014) defines individual trauma as

results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life-threatening and that has lasting adverse effects on the individual’s functioning and mental, physical, social, emotional, or spiritual well-being (p. 7).

c. **Lived experience in research and chronic pelvic pain**

While most of the quantitative CPP cross-sectional research identifies and examines the strength of associations between CPP and variables (i.e., abuse, depression, anxiety, PTSD, pain catastrophizing, physical functioning, and social support), lived experience research reveals the context and culture in which these comorbidities begin, develop and influence aspects of the persons’ life. Lived experience research describes the: what, when, how, and why. The emphasis is on directly asking about the phenomena of interest (e.g., *what is it like to feel CPP? How did you get a CPP diagnosis.... what was that experience like?*). Analysts unpack the interviewees' lived experiences, perceptions, and meanings. Anthropologists Grace and MacBride-Stewart's (2007) phenomenological

exploration into the broad question of women's embodied experience with pain asked 40 women with CPP in New Zealand to “reflect on ‘how come’ they have chronic pain” (p. 47) and used a biocultural interpretative lens in their analysis. Their findings show that the women parroted medical discourse in constructing their understanding of their CPP development, verifying their “not knowing” why the CPP developed and normalized their CPP. Toye et al. (2014) conducted a systematic review. They integrated the qualitative findings in the development of a conceptual model to advance their understanding of patient experiences of CPP, including the following categories: “relentless and overwhelming pain; threat to self; unpredictability, struggle to construct pain as normal or pathological; a culture of secrecy; the validation by diagnosis; ambiguous experience of health care; elevation of experiential knowledge and embodiment of knowledge through a community” (p. 2713).

However, none of the literature describes *what healing is like—to become whole? What is it like to experience relief from CPP?* None of the literature captures points across peoples’ life courses that portray their resilience in interacting within their social ecology. There is a minimal indication of what and how interactions within people’s everyday environment – their social ecology (dynamic interactions across the nested individual, interpersonal, community, and societal levels, such as social engagement, settings, activities, and culture) influence their healing trajectory and resilient expressions. Moreover, there is a lack of attention to what and how structural drivers (i.e., racism, sexism, classism, and ableism) (Krieger, 2019) and SDOH over the life course, such as neighborhood and social and community context factors, including community violence, safe neighborhoods and schools, community mental health and access to services, social support and networks, incarcerated parents; economic stability, such as food (in)security; (un)safe and (un)affordable housing; (un)employment; (un)safe workplace; education access and quality and healthcare access and quality influence their healing and resiliency.

Lived experience research seeks to understand the complex, multi-level, cultural, and dynamic relationships between CPP and interpersonal violence with an ecosocial. It offers contextual, thick

contextual, and culturally sensitive descriptions and is well suited for exploring complex, interpretative conceptual frameworks.

2. **Background**

Attention to health equity as a process and outcome is missing from the CPP literature landscape. In addition to the gaps identified above, little attention to the research process is apparent that attends to issues of research practice and ethics, specific consideration about the experiences that many female patients with CPP have encountered (e.g., the prevalence of history of interpersonal violence, depression, anxiety, post-traumatic stress disorder [PTSD], stigma, the long duration for diagnosis, unsuccessful or inappropriate treatment, lost opportunities for work, academic, social, and family life, and overlapping pain conditions). Diagnosing and treating CPP in females is challenging. Refer to Chapter I for the CPP literature. The literature trail and articles discussing medical utilization demonstrate the stigma CPP female patients and research participants undergo in quantitative post-positivist research designs.

Pain catastrophizing is a construct that reliably (e.g., replicated) is found among people with chronic pain and CPP. The clinical significance is that intervention through pain management, and self-regulating education may reduce pain catastrophizing at the individual level. At the same, this is a stigmatizing and negatively reinforcing construct directed at the individual and removes responsibility and accountability from the many gatekeepers and stakeholders involved. The complex nature of developing and living with CPP is anxiety-provoking (i.e., lengthy diagnosis, unsuccessful treatment processes, and the potential of interacting cumulative stress from SDOHs and structural drivers). The CPP research does not ask what experiences are related to resilience, finding relief from pain, personal growth, and health. For female communities that experience trauma and interpersonal violence, fragmentation of one's self-concept, memory, and body is commonplace in relationship to specific phenomena at any given time, dependent on their trauma experience.

Trauma robs you of the feeling that you are in charge of yourself, of what I will call self-leadership. The *challenge of recovery is to reestablish ownership of your body and mind – of yourself*. This means feeling free to know and to feel what you feel without feeling overwhelmed, enraged, ashamed, or collapsed. For more people, this involves finding a way to *become calm and focused* and learning to maintain that... *reconnecting* with human beings...*getting in touch with sensations and emotions*...helping people *deal with their 'sensory world,'* and *'integrating traumatic memories'* (van der Kolk, 2014, p. 215).

Given the lack of a health equity paradigm and critical community health perspective in the CPP literature, I developed the transformational, Anti-Oppressive Praxis for CHET-Research Organizing framework (see Chapter IV, Aim 1) with this MMR study protocol in mind. Feminist mixed methodologist, Hesse-Biber (2010) explains that effective MMR research follows a comprehensive organizing framework and adherence to it. Qualitative approaches focusing on social justice and change are transformative (Mertens, 2011). The Anti-Oppressive Praxis for CHET-Research framework is written from a community health perspective to support transdisciplinary research.

In contrast to much of the post-positivist CPP research, my protocol pursues health equity as a process and outcome by actualizing the Anti-Oppressive CHET-Research framework. Central to the framework is participatory engagement with the communities with lived experience of the health phenomena of interest and their allies. Such practice is emerging commonplace practice in transdisciplinary research. Figure 6 presents The Anti-Oppressive Praxis for CHET-Research framework.

3. The study's purpose and implementation

The purpose of my anti-oppressive, convergent, phenomenological MMR study is to explore the embodied healing and resilient experiences and meaning-making among ciswomen adult survivors of interpersonal violence with a history of CPP (ages 25-61 years; recruited from community-based and clinic settings that specialize in CPP) in Chicago. Greene and Caracelli (1997) characterize transformative MMR as value-based, action-oriented research. The study seeks insights into their ecosocial contexts. I intend to engage the enrolled women as co-researcher participants. Anti-oppressive scholars encourage qualitative research participants as active co-researchers because they

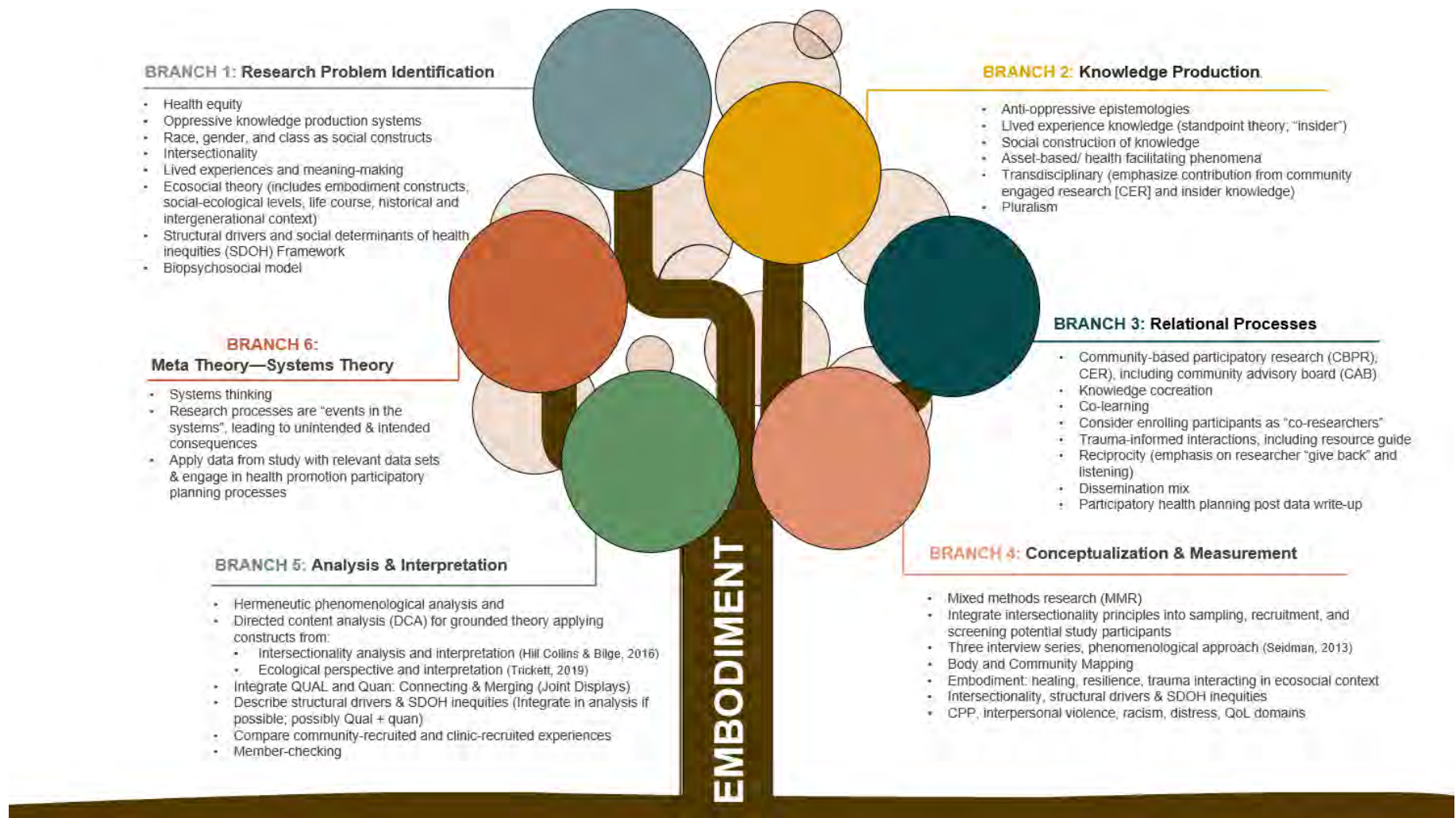


Figure 6. Anti-Oppressive Praxis for Community Health Equity Trauma Research – a conceptual organizing research framework.

co-construct their data with the rest of the research team (Strega and Brown, 2015). Saint Arnault (2017) recognizes that many women are reluctant to share and emphasizes that “research and intervention must ensure that the survivor can tell her story without revictimization while also aiming to restore personal mastery, empowerment, and self-understanding” (p. 2). The construction of the Anti-Oppressive Praxis for CHET-Research integrates TIA and CER principles. Community engaged research methods realize the necessity of the insider community’s participation in data generation (Ryerson Espino and Trickett, 2008; Trickett, 2011; Trickett and Beehler, 2017).

A convergent (or concurrent or parallel) MMR design involves collecting qualitative and quantitative data concurrently with one dataset indicated as primary and the other secondary. Use of “the capitalized term “*QUAL*” to denote the dominance of the qualitative component of a study in a qualitative approach to MMR design; the lowercased ‘*quan*’ is used to indicate the auxiliary role of the quantitative component” (Hesse-Biber, 2010, p. 64). Researchers identify points of integration, which is when and where the mixing of quantitative and qualitative analysis occurs (Fetters et al., 2013; Fetters and Freshwater, 2015; Hesse-Biber, 2010; Meissner et al., 2011). The three most common types of integration are connecting, merging, and embedding data (Fetters et al., 2013; Meissner et al., 2011).

a. **Study aims and alignment with the anti-oppressive praxis: Community health equity trauma organizing research framework**

i. **Aim 1**

Explore and describe the embodied nature, perceptions, meaning-making, and ecological context of healing and resilience across the co-researcher participants’ life course using hermeneutic phenomenological analysis.

- The Aim 1 MMR approach is *Community Advisory Board (CAB) (review interview guide and hermeneutic phenomenological analysis approach prior collection) → QUAL analysis (draft) → QUAL + quan (draft) → Member Check QUAL + quan → Final QUAL + quan*

- Sub-aim 1.1 is to compare and contrast healing and resilience among the community-recruited and clinic-recruited co-researcher participants.
- Sub-aim 1.2 is to describe features of embodied trauma if the phenomenological data lends.
- Sub aim 1.3 is to describe the co-researcher participants' range of experiences, perceptions, and meanings of their interactions and related social and physical spaces/settings where healing and resilience occur, if the phenomenological data permits.
- Sub-aim 1.4 is to discern whether and describe how the qualitative themes agree, expand, or diverge with the findings generated from the following quantitative self-report questionnaires: (a) Conner-Davidson Resilience Scale (CD-RISC 10) (Campbell-Sills and Stein, 2007) ; (b) The Self-Integration Scale, Version 2.1 (Meza and Fahoome, 2008); and The Experience of Embodiment Scale (EES) (Piran et al., 2020). The MMR integration analysis for sub-aim 1.4 will be done by merging.

ii. **Aim 1 corresponding research questions**

The following research questions can be considered by the CAB.

The research protocol is suitable for answering these questions.

- What is it like living, healing, and expressing resiliency as survivors of interpersonal violence with CPP within their ecosocial context? What are natural expressions of improved, restored, or recovered changes? What expressions and sources of embodiment come to light?
- Do their lived healing and resiliency experiences shed light on the type of elements and dynamic interactions involved across time and space, such as behavior, perceptions, sensations, emotions, attitudes, beliefs, resources, reserves, types and quality of interpersonal relations, physical spaces/settings, activities, and ripple effects? If yes, how?
- How and under what ecological contexts do the nature of healing and resilience differ across the co-researcher participants? Do typologies emerge? If so, what are they?

- What, if anything, emerges about the individual or perceived collective or shared nature and expression of trauma or embodiment?
- Do co-researcher participants perceive a connection between their interpersonal violence, CPP, overlapping mental and physical conditions, healing, or resilience experiences?
- What meanings develop? In what ways? When? At what point in their lives? What contextual factors have they experienced or interpreted? How do perceptions and meanings influence their health, healing, and resilience trajectories?
- If not, what other ways do they relate their experiences or make sense of their journeys? How do perceptions and meanings influence their health, healing, and resilience trajectories? How do they experience and attribute meaning to communal spaces where healing and resilience occur? If yes, how? How do they describe their experiences, meanings, or perceptions regarding how their interactions shape the healing and resilient social or physical environments?

iii. **Aim 2**

Develop grounded theory, or emerging insights, to explore embodied ecosocial or social-ecological conduits of patterns of interactions influencing embodied healing and resilience using DCA.

iv. **Aim 2 corresponding research questions**

The research protocol is suitable for answering the following questions.

These following research questions can be considered by the CAB.

- What are the influences of perceptions, intentions, and behaviors? What are interdependent social processes and influences? What nuanced, contextual, dynamic, and life-course patterns become apparent to phenomena closely related to healing concepts? To concepts of resilience?

TABLE XVI
ALIGNING THE ANTI-OPPRESSIVE PRAXIS FOR COMMUNITY HEALTH EQUITY TRAUMA RESEARCH
TREE BRANCHES (THEORIES, CONSTRUCTS, MEASURES, ANALYSIS, AND PRAXIS) WITH AIM 1

<p><u>Branch 2: Knowledge Production</u></p> <ul style="list-style-type: none"> • Anti-oppressive epistemology & praxis <ul style="list-style-type: none"> ▪ “Co-researcher participant.” ▪ Lived experience knowledge ▪ The social construction of knowledge ▪ Asset-based: healing and social-ecological resilience • CER contributes to transdisciplinary knowledge • Pluralism with MMR integration
<p><u>Branch 3: Relational Processes</u></p> <ul style="list-style-type: none"> • Community-engaged research, including CAB • Knowledge co-creation • Trauma-informed interactions, including the resource guide
<p><u>Branch 4: Conceptualization and Measurement</u></p> <ul style="list-style-type: none"> • Mixed methods research • The three-interview series with body, community, and social network mapping phenomenological approach • An embodiment of healing, resilience, and trauma interacting in the social ecology over the life course • Intersectionality, structural violence, and SDOHs • Chronic pelvic pain, interpersonal violence, health history, and Quality of Life (QoL) life domains
<p><u>Branch 5: Analysis and Interpretation</u></p> <ul style="list-style-type: none"> • Hermeneutic phenomenological analysis • Compare experiences of patients treated in the clinic with women from community spaces (health equity data) • Quantitative measures • Integrate <i>QUAL + quan</i> (Connecting and Merging) • Integrate CER w/CAB and member-checking
<p><u>Branch 6: Systems Thinking</u></p> <ul style="list-style-type: none"> • Initial thinking about healing and resilience occurring in place/space, notice the social-ecological level of resilience and healing experience and identify people, settings, and activities involved. What ecological conduits begin to emerge? • Keep place/space and local ecology in mind when member-checking w/CAB and local women’s groups, and listen for potential hubs for health promotion and prevention planning.

- What political economy dynamics or factors, social inequalities, power relations, relational/interconnectedness dynamics, and structural determinants are perceived and described by the co-researcher participants, if any?

TABLE XVII.
ALIGNING THE ANTI-OPPRESSIVE PRAXIS FOR COMMUNITY HEALTH EQUITY TRAUMA RESEARCH TREE
BRANCHES (THEORIES, CONSTRUCTS, MEASURES, ANALYSIS, AND PRAXIS) WITH AIM 2

Like the above Aim 1, with the following additions:
<u>Branch 4: Conceptualization and Measurement</u> <ul style="list-style-type: none"> • The three-interview series with the body, community, social network, and optional lifeline mapping phenomenological approach • An embodiment of healing, resilience, and trauma interacting in the social ecology over the life course • Intersectionality analysis, structural drivers, and SDOHs, including social support • Ecological perspective and metaphor • Chronic pelvic pain, interpersonal violence, general health,
<u>Branch 5: Analysis and Interpretation</u> <ul style="list-style-type: none"> • Directed content analysis, for grounded theory, applies intersectionality analysis and the ecological metaphor as interpretative frameworks for insights into community and interpersonal level interactions • Compare experiences of patients treated in the clinic with women from community spaces (health equity data) • Integrate CER w/CAB and member-checking

v. **Aim 3**

Integrate and describe co-researcher participants' contextual and health-related characteristics encompassing intersectional positions and identities.

- The MMR approach is *CAB (review screening and questionnaire indicators pre-collection)* →
QUAN + QUAL
- The MMR Approach to Analysis is the following:
 - (a) Connecting quantitative (screener survey data) to determine study maximum sampling frame.

(b) Connecting quantitative (screening survey data) to determine study maximum sampling frame.

(c) Merging *QUAL analysis + quan analysis*; use of joint displays.

TABLE XVIII.
ALIGNING THE ANTI-OPPRESSIVE PRAXIS FOR COMMUNITY HEALTH EQUITY TRAUMA RESEARCH TREE
BRANCHES (THEORIES, CONSTRUCTS, MEASURES, ANALYSIS, AND PRAXIS) WITH AIM 3

<u>Branch 4: Conceptualization and Measurement</u> <ul style="list-style-type: none"> • Mixed methods research • Describe contextual characteristics, structural drivers, and SDOHs • Chronic pelvic pain, interpersonal violence, health history, and quality of life domains
<u>Branch 5: Analysis and Interpretation</u> <ul style="list-style-type: none"> • Quantitative measures • Integrate <i>QUAL + quan</i> (Connecting and Merging/Joint Displays) • Integrate CER w/CAB and member-checking

b. **Participatory study team and collaborators**

Table XX identifies the diverse members of the study team, research activities, and how power-sharing and voice will be operationalized.

c. **Embodiment constructs**

Attention to embodiment during the research process and the investigation of embodiment as it relates to trauma and strength-based phenomena is the cornerstone of the CHET-Research framework. The anti-oppressive praxis enacts trauma-informed (TI) interactions to promote positive embodied experiences throughout the research process. It offers the lens to observe how women's embodied practices connect meaningfully to structures, discourse, and the phenomenology of healing and resilience (Piran, 2016).

TABLE. XX
PARTICIPATORY STUDY TEAM AND COLLABORATORS

Participatory Team	Activities	Voice and Power-sharing
Lead co-researchers	Facilitates interviews and engages in data analysis and interpretation, member checking facilitation, and dissemination	<ul style="list-style-type: none"> • Share voice throughout the research process • Competitive wage • Manuscript authorship • Option to anonymously include their narratives of trauma, resilience, and healing as supplemental data • Option to continue conversations, future research, and or education with communities relating to the topic
Community advisory board (CAB)	Invite community leaders and representatives from community-strengthening organizations (CSOs) to join the CAB. The study team will invite CAB members to engage in pre-data collection planning, check-ins that fit the schedule for the member, data member-checking, and post-analysis for dissemination mix and potential planning.	<ul style="list-style-type: none"> • Share voice throughout the research process. • Stipend • Manuscript authorship • Option to anonymously include their narratives of trauma, resilience, and healing as supplemental data • Option to continue conversations, future research, and or education with communities relating to the topic
Community-strengthening organizations (CSOs) or leaders—Trusted allies and portals to women survivors of interpersonal violence/trauma	<p>Participates to the extent of their capacity in recruitment, member-checking, dissemination, and “academic give back” efforts</p> <p>May provide insights into culturally and linguistically relevant approaches</p> <p>Option to join CAB</p>	<ul style="list-style-type: none"> • Option for a representative to join CAB • Stipend • Voice during recruitment, member-checking, dissemination, and “give back.” • Option to continue conversations, future research, and or education with communities relating to topic or spin-offs
Co-researcher study participants	<p>Engages with co-researcher study operations team</p> <p>After the study completion, I will invite them to co-researchers to co-facilitate a focus group.</p> <p>See study Aim 4 for details.</p>	

Chronic pelvic pain literature does not exist that seeks to grasp the ecosocial embodiment of CPP, healing, and resilience. The embodiment constructs of the ecosocial theory include pathways of embodiment, the cumulative interplay of exposure, susceptibility, and resistance across the life course and levels, and accountability and agency (Krieger, 2005, 2011; Krieger et al., 2013) (See Chapter II).

My proposed study protocol recognizes two varying conceptualizations of embodiment, yet both involve critical theory: (1) ecosocial theory's embodiment construct (Krieger, 2011) and (2) phenomenology's conceptualization of embodiment (Merleau-Ponty, 1962; Piran and Teall, 2012). Anti-oppressive perspective includes critical feminist theory, which foregrounds women's embodied practices as shaping important social structures and discourse while recognizing the background that these social experiences relate to body fragmentation and pain (Piran, 2016). See Bartky (1988); Foucault (1995) for further reading. The phenomenological MMR design allows for the emergence of the women's own embodied experiences and meanings (phenomenological approach), interpretative frameworks to uncover embodied pathways via structural and social processes (DCA with grounded theory), and mixed methods integration of the phenomenological embodiment themes compared (i.e., agreement, expansion, divergence) to the Experience of Embodiment Scale (EES) (Piran et al., 2020). Refer to Table XXI for an overview of embodiment constructs, conceptualization, and how it is reflected in the study protocol, measurement, and analytical approach.

d. **Conceptualizations of healing**

I identified a psychological and social construct of healing developed by Meza and Fahoom (2008). While their construct involves context, it is within a therapeutic relationship where one person holds power. I turned to collective healing, which applies a more interdependent and social-ecological approach. Table XXII compares the two constructs and indicates how they will be studied.

TABLE XXI.
EMBODIMENT CONSTRUCTS, CONCEPTUALIZATION, AND METHODOLOGICAL APPROACH

Embodiment constructs	Conceptualization	Methodological Approach
Ecosocial theory	“how we literally embody, biologically, our lived experience, in a societal and ecological context, thereby creating population patterns of health and disease” (Krieger, 2011, p. 215).	Study guidance by the ecosocial context of CPP among survivors of interpersonal violence conceptual framework Directed Content Analysis using the interpretative frameworks of intersectionality analysis (Hill Collins and Bilge, 2016) and ecological perspective (E. Trickett, 2019) in Grounded Theory Analysis (Aim 2)
Phenomenological, philosophical	Philosophical underpinnings from Merleau-Ponty (1962) contrast embodiment with Cartesian ontology. “Mind and body were [are] equivalent, intertwined, inseparable” (Piran et al., 2016, p. 171). “Lived experience of engagement of the body in the world” (Piran and Teall, 2012, p. 171).	Phenomenological Three Series – Interview and Hermeneutic Phenomenological Analysis (Aim 1)
Phenomenological and psychological: The experience of embodiment	A spectrum of positive to negative embodiment (Piran, 2016). The overall experience of embodiment relates to experiences on five continuous dimensions: <ol style="list-style-type: none"> (1) body connection and comfort, (2) agency and functionality, (3) experience and expression of desire, (4) engagement in attuned self-care practices, (5) resistance to self-objectification (Piran, 2016, 2017; Piran et al., 2020) 	Self-report the Experience of Embodiment Scale (EES) (Piran, 2016, 2017; Piran et al., 2020) MMR Integration Point: Assess agreement, expansion, and divergence of the EES results with the embodiment themes from the phenomenological analysis (Aim 1.4)

TABLE XXII.
HEALING CONSTRUCTS, CONCEPTUALIZATION, AND METHODOLOGICAL APPROACH

Healing constructs	Conceptualization	Methodological Approach
Collective healing (social-ecological perspective)	See Chapter II	Phenomenological Three Series – Interview and Hermeneutic Phenomenological Analysis (Aim 1)
The psychological and social construct of healing	<p>“Healing is the human experience of self-discovery and transformation, resulting in being whole and connected” (Meza and Fahoom, 2008, p. 356).</p> <p>It is observable as (the construct domains):</p> <ol style="list-style-type: none"> (1) Antecedent trauma initiates behaviors resulting in recurring painful experiences. (2) a beginning of the healing process based on a therapeutic relationship with another ‘safe’ person holding socially constructed power (the healer) (3) Using therapeutic relationships to facilitate emotional awareness, repairing relationships with oneself, others, and a higher power. (4) Behavior changes that are adaptive and ameliorate the painful experiences. (5) Reaching out to facilitate healing others (p. 356) 	<p>The Self-Integration Scale, Version 2.1 (Meza and Fahoom, 2008)</p> <p>MMR Integration Point: Assess agreement, expansion, and divergence of the Self-Integration Scale, v2.1 results with the healing themes from the phenomenological analysis (Aim 1.4)</p>

e. **Conceptualizations of resilience**

Table XXIII presents a social-ecological perspective compared to an individual-level conceptualization of resilience. It identifies measurement tools, analysis methods, and how the qualitative and quantitative data will intergrated.

f. **Primary methodological approach: Qualitative research**

Qualitative research is inductive, subjective, emphasizes meaning, and seeks to understand complexity (Creswell, 2014). I propose a phenomenological interviewing approach, with mapping activities analyzed by (1) hermeneutic phenomenological analysis to elicit in-depth descriptive text that illuminates the structure(s) of the phenomena of interest and (2) constant comparative analysis (CCA) as part of the grounded theory method (GTM) to conceptualize healing and resilience within social-ecological perspectives and to gain insights on the ecosocial context.

TABLE XXIII.
RESILIENCE CONSTRUCTS, CONCEPTUALIZATION, AND METHODOLOGICAL APPROACH

Resilience constructs	Conceptualization	Methodological Approach
Resilience using a social-ecological perspective	See Chapter II	Phenomenological Three Series – Interview and Hermeneutic Phenomenological Analysis (Aim 1)
Resilience at the individual level	Ability to adapt, bounce back, and cope with stress A standard measure of resilience is the CD-RISC 10 or 25 examines stress-coping ability and uses concepts of hardiness, adaptation, and stress endurance. The five factors are included, “1) personal competence, high standards, and tenacity; 2) trust in one’s instincts, tolerance of negative affect, and strengthening effects of stress; 3) positive acceptance of change and secure relationships; 4) control, and 5) spiritual influence” (Campbell-Sills and Stein, 2007; Davidson and Connor-Davidson, 2017; Fu et al., 2014; Lu et al., 2020; Yu et al., 2011, p. 219).	MMR Integration Point: Assess agreement, expansion, and divergence of the CD RISC 10 results with the healing themes from the phenomenological analysis (Aim 1.4)

Phenomenological researchers draw on techniques supporting slowing down and openness to how things are experienced and becoming (Vagle, 2016). We are interested in studying the lifeworld—the world as lived, not as it is measured, correlated, represented, or categorized (Vagle, 2016).

Phenomenology is rooted in the philosophy of lived experience and illuminates interconnected contextual lifeworld dimensions: (1) temporality, (2) spatiality, (3) embodiment, (4) interconnection, and (5) mood (van Manen, 2016). The phenomenological theory explores the meaning of individuals’ experiences in the context of their lives (Seidman, 2013).

Phenomenological research aims at gathering a deeper understanding of subjective experiences, emphasizing the nature, or meaning of people’s everyday experiences (Vagle, 2016; Willig, 2013). It seeks to illuminate and dig deep into “the nature or meaning” of our experience (Vagle, 2016, p. 9). By uncovering meaning, we gain insights into direct engagement in the lifeworld, such as intentionality. Intentionality describes the relationship between the person living their experience and the events of her experience (Dahlberg et al., 2008). The “lived experience” in its fundamental sense is the “pre-

reflected consciousness of life: a reflexive or self-given awareness, which is, as awareness, unaware of itself” (van Manen, 2016, p. 35). The lived experience has a temporal structure and cannot be fully grasped immediately but “reflectively as a past presence” (van Manen, 2016, p. 36).

The phenomenological focus on the act of “being” during the lived experience is like “being in the present moment” (van Manen, 2016, p. 36) and complements contemplative studies and cognitive science (Kordeš, 2016). This is significant as contemplative practice has been shown to improve mental health and CPP. Selecting a methodology that might be able to parallel or reflect some tools that the participants may have used in their journeys may provide valuable from a data collection and trauma-informed study perspective.

Social-ecological perspectives conceptualize opportunities for health and illness as occurring within people’s daily lives, where they live, work, pray, and play (Healthy People 2030, 2022). Context is a core element of community psychology’s ecological perspective and helps us learn about the people, settings, activities, culture, and events in the participant life relevant to their experiences (Hawe and Riley, 2005; Trickett, 1995, 2009a, 2019, Trickett and Rowe, 2012). Attention to social context is foundational to intersectional analysis (Hill Collins and Bilge, 2016). Awareness that historical, intellectual, political, and cultural contexts often shape people's actions and thoughts. Social context offers a backdrop for examining social inequalities, power relations, and interconnectedness (Hill Collins and Bilge, 2016). The related constructs involve the ecological perspective (Trickett, 2019), intersectionality analysis (Hill Collins and Bilge, 2016), and ecosocial theory (Krieger, 2019) support the exploration of this social contextual phenomenon that may reveal itself in the background of the healing and resilience experiences.

The unit of analysis is the phenomena, not the individual (Vagle, 2016). Gathering numerous first-person accounts of women’s experiences of healing and resilience across their life course in the context of CPP and interpersonal violence brings us closer to understanding these nuanced journeys.

Their narratives may include insights into their encounters, interactions, and interconnectedness with multi-level phenomena in a social context. These may include the following: interpersonal (i.e., partners, family, friends, peers, teachers, mentors, colleagues); community-level (community activities and practices, social networks, faith-based community practices); institutional-level (work, school, religion, legal and law enforcement, and social services); built, natural, or virtual environments; power relations; and social and health inequalities.

g. **Mixed methods research**

Mixed methods research advances the understanding of complex health science phenomena, is recommended for applied community health, and lends itself toward transformative intentions (Creswell, 2014; Fetters et al., 2013). This approach encourages researchers to identify their philosophical positions of knowledge (Creswell, 2014; Hesse-Biber, 2010). Mixed methods researchers engage in dialogue and tensions to bridge social constructivist and post-positivist worldviews, practical applications, and transformative approaches (Creswell, 2014). Anti-oppressive researchers can engage in MMR to reveal non-dominant knowledge and silenced voices (Hesse-Biber, 2010). Mixed methods research began to study gender, race, ethnicity, disability, and sexual orientation (Mertens, 2011).

i. **Phase 1**

To enroll and retain the desired study sample for the qualitatively driven study approach and to improve the validity of the qualitative research findings, I employ a convergent mixed methods sampling design (*QUAN + QUAL*) (Hesse-Biber, 2010, p. 184). Specifically, the study team invites interested potential co-researcher participants to complete a predominately quantitative screener survey (containing one qualitative, open-ended question) assessing study inclusion and exclusion criteria and specific health and SDOH information. The study team analyzes the screening results to inform the sampling frame selected to participate in the convergent phenomenological MMR

study. This analytical and interpretation process connects the quantitative screener survey data to the qualitative interviews.

ii. **Phase 2**

To collect qualitative experiences through three in-depth interviews using a phenomenological approach. During the first study visit, the study team personnel will ask co-research participants to complete a set of questionnaires to respond to validated instruments assessing resilience, healing, and embodiment; SDOH characteristics; and CPP measures. Upon qualitative and quantitative analysis of these datasets, I will merge the data, including joint display (Fetters and Freshwater, 2015; Guetterman and Creswell, 2015).

Figure 7 diagrams the MMR data collection flow and data sets. The purple shaded boxes represent the research activities that I will conduct. The yellow shaded boxes indicate the co-researcher participant interactions with study procedures and the co-researcher study team. Green shades signal moving forward with data collection with a given participant. Red shades indicate a need to halt data collection with a potential participant. Blue shades define the quantitative data sets, and the aqua shades identify the qualitative data topics.

h. **Co-researcher participants and study settings**

i. **Sample size and recruitment settings**

I will recruit 35-100 women to enroll 30-40 ciswomen co-researcher participants, ages 25-61. I will recruit half of the sample from community-based spaces in Chicago and the other half from Chicago clinics specializing in CPP patients. Qualitative studies tend to enroll fewer participants than quantitative studies because the focus is on complex, contextual, and subjective experiential data compared to quantitative studies that privilege larger sample sizes for generalizable data. Size depends on answers to two main questions relating to sufficiency and saturation. “Are there sufficient numbers to reflect the range of participants and sites that make up the population so that

CONVERGENT MIXED METHODS DATA COLLECTION FLOW, DATA SETS, & POINTS OF DATA INTEGRATION

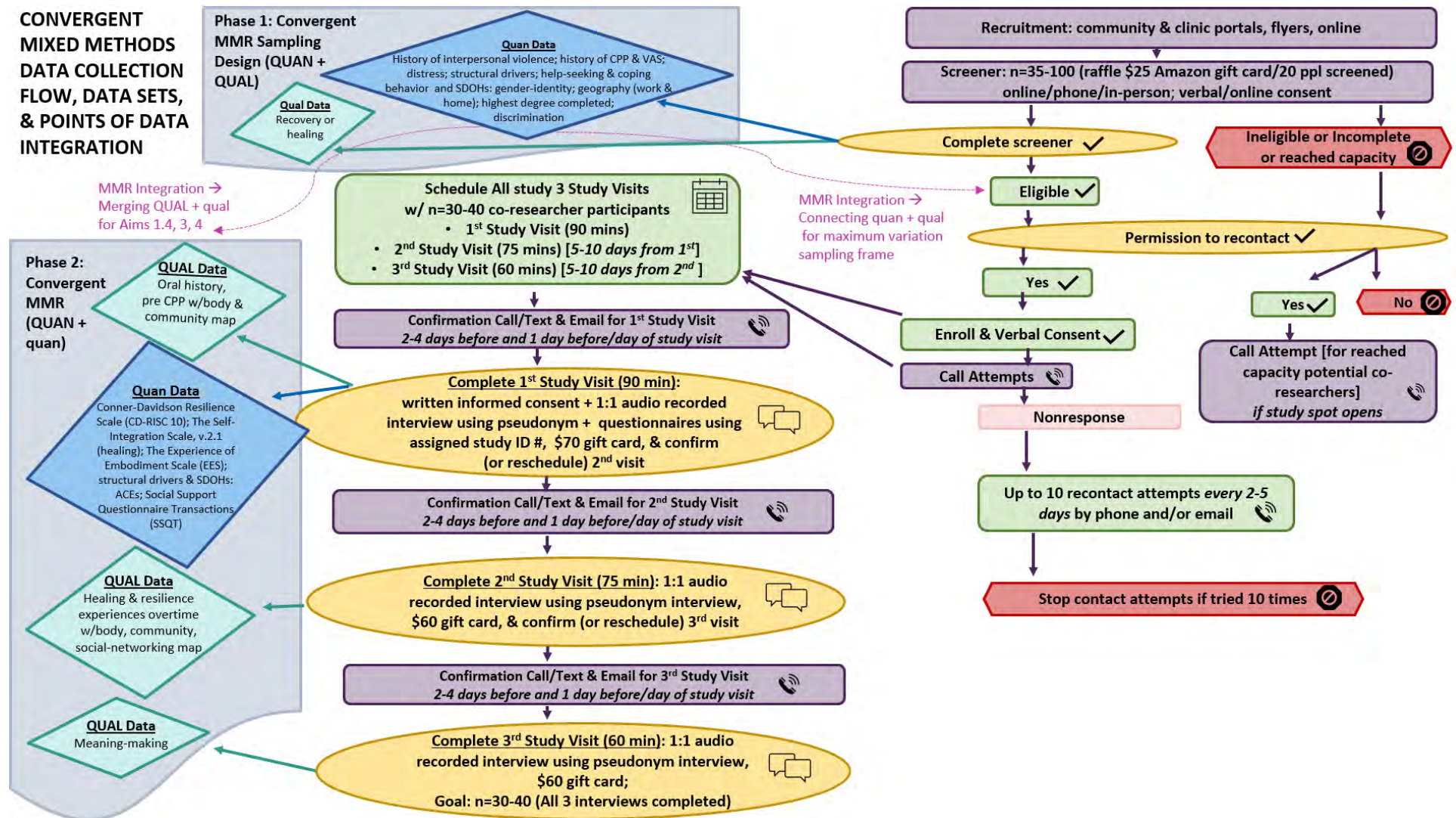


Figure 7. Convergent mixed methods data collection flow, data sets, and points of data integration

others outside the sample might have a chance to connect to the experiences in it” (Seidman, 2013, p. 58)? Saturation of information is when the interviewer hears a repetition of the same information (Glaser and Strauss, 1967; Lincoln and Guba, 1985; Seidman, 2013).

Phenomenological analysis and grounded theory benefit from a larger sample size (Creswell, 2014) than other qualitative studies to meet sufficiency and saturation. For instance, in phenomenological analysis, the sample size ranges from 1 to 325 (Polkinghorne, 1989). Recommended sample sizes for phenomenology include 1 to 10 people (Dukes, 1984; Hesse-Biber, 2010). Charmaz (2006) and Hesse-Biber (2010) recommend 20 to 30 individuals for grounded theory to develop a well-saturated theory but note that this number may be much more significant. I opted for 30-40 people to ensure sufficiency and saturation of experiences for two primary reasons.

First, because this study is interested in comparing the healing and resilience experiences from a stratified purposeful sample: (1) ciswomen recruited from a reputable academic medical center (located in Chicago metropolitan area), who received treatment for CPP, and (2) ciswomen recruited from diverse community-based spaces. A sample of 30-40 individuals allows for analysis of 15-20 ciswomen from community-based settings compared to 15-20 ciswomen from the clinic. Second, this study is also interested in analyzing convergent and divergent experiences and perspectives with people or groups. Who experience various intersectional social positions and racial, ethnic, and class identities over their life course. The more case examples surrounding the phenomena of interest, the greater the ability to describe the range of experiences and nuances involved in the phenomena of interest. From a phenomenological analysis perspective, a primary goal is to describe the experiences and sub-experiences comprising the phenomena of interest.

A strong critique of phenomenological, descriptive analysis is its intention to capture the “essence” of a phenomenon. Critics argue that the practice removes the possibility of describing differences across individuals or communities, which directly conflict with intersectionality and critical

feminist theory. Solutions are impossible by imagining and describing women and their experiences as one homogenous group (Crenshaw, 1991, Hill-Collins and Bilge, 2016). This study aims to collect variation drawing from a large sample to describe better the breadth, similarities, and differences across experiences. Ultimately variations of healing experiences help construct a more holistic understanding of recovery trajectories and healing meanings journeys among ciswomen adult survivors of interpersonal violence with a history of CPP. It should be noted that the sample size number may increase depending on available funding.

ii. **Sampling plan**

To enroll and retain the desired study sample for the qualitatively driven study approach, I employ a convergent mixed methods sampling design (QUAN + QUAL) to improve the validity of the qualitative research findings (Hesse-Biber, 2010, p. 184). Specifically, the study team invites interested potential co-researcher participants to complete a predominately quantitative screener survey (containing one qualitative, open-ended question) assessing study inclusion and exclusion criteria and specific health and demographic information. The study team analyzes the screening results to inform the sampling frame selected.

I use stratified purposive, snowballing sampling techniques to gain maximum variation in recruiting 35-100 women from racially, ethnically, and socio-economically diverse community-based spaces and an academic clinic setting (Seidman, 2013). The following is the anticipated sampling frame, including sample size and characteristics: 30-40 ciswomen co-researcher participants; ages 25-61; comfortable writing and speaking English; interpersonal violence experience(s) at least prior CPP; CPP (previous or current); varying recovery trajectories or healing experiences; varying intersectional racial, ethnic, class, and geographic identities. Maximum variation sampling is typical in qualitative research when the research team decides in advance criteria that differentiate the recruitment sites or potential participants and then selects sites or participants that vary on the criteria. This approach is valued for

this study because maximizing differences at the beginning of the study increases the likelihood that the findings reflect different experiences and perspectives (Creswell, 2014; Seidman, 2013).

Stratified purposive, snowball sampling presents the subgroups of women recruited from community-based spaces who may or may not have received medical treatment compared to women recruited from an academic, clinical setting who received therapy for CPP (Creswell, 2014). A purposeful, snowball sampling approach promotes the study opportunity to a wide range of women who may have a history of interpersonal violence before the onset of CPP.

The inclusion criteria consist of the following:

- Age ≥ 25 -61 years old
- Identifies as female
- Chicago and the metropolitan area
- Fluent in written and spoken English
- History of interpersonal violence before CPP
- History of CPP (current or previous)

The exclusion criteria include the following:

- Significantly distressed as measured by Kessler 6 (a score 21+)
- Identifies as a male or not a ciswoman
- Age <25, >61
- Does not speak English
- Does not report a history of interpersonal violence
- Does not report a history of CPP
- Outside of Chicago metropolitan area

iii. **Recruitment practices**

Recruitment practices promote the study opportunity widely across various geographical locations and settings to enroll a maximum variation sampling frame of adult ciswomen with socioeconomic, racial, and ethnic diversity. My objective is to cast a wide net for a niche of ciswomen, ages 25-61, with a history of interpersonal violence, CPP (past or current), and who may be on a recovery trajectory or experienced healing, both in community-based and clinic settings, while including women from a variety of social positions and socially constructed identities.

I plan to recruit women from the community and clinical settings in various Chicago north, west, and near south neighborhoods. I will leverage existing relationships and foster new relationships with community portals. Many have expressed enthusiasm and interest in this research investigation because their clients and patients experience CPP or related bladder and bowel health concerns. The community portals maintain access to networks of survivors of interpersonal violence and are trusted allies. I intend to invite direct contacts of the community portals to join the CAB. Recruitment strategies include distribution of flyers; announcements circulated via list serves; announcements/flyers posted on websites, Facebook, Twitter, and Instagram; announcing the study opportunity at community events (i.e., a neighborhood center and CBO meetings, book clubs, community garden gatherings, church social events, exercise classes at health clubs and wellness centers).

iv. **Screening procedures and data**

Interested participants will complete the screener surveys online using the encrypted university REDCap platform. Alternatively, they can call the study project phone or email to express interest in completing the screener survey. A study team member will complete the screener over the phone. Potential participants may also complete the screener surveys with a study team member during recruitment activities at community events. The screener questions will determine the potential participants' eligibility for the study. Table XXIV displays the overview of the screening questions.

i. **Phenomonological three in-depth series of interviews with mapping**

The interviewer will engage the co-researcher participant in the three-series in-depth phenomenological interview approach (Seidman, 2013) and body, community, and social network mapping (Brett-MacLean, 2009; Lys et al., 2018; MacGregor, 2009; Parker, 2006; Saint Arnault, 2017; Scorgie et al., 2017; Stack-Cutler et al., 2017; Stadler et al., 2013). Seidman (2013) recommends that the interviewer maintain the structure of the series by focusing on the purpose of each interview. This focus creates space for open-ended, in-depth inquiry and provides a foundation of detail that connects to the

TABLE XXIV
OVERVIEW OF SCREENING QUESTIONS

Structural SDOHs	Intermediary SDOHs	Eligible Intersectional Characteristics	Health Outcome	Item	Question	Determine Eligibility Identify...
✓				Gender identity	How do you currently identify your gender?	Ciswoman,
✓		✓		Age	How old are you?	ages 25-61,
✓				Language	Are you comfortable participating in interviews conducted in English and responding to English-written questionnaires?	Who are comfortable speaking, reading, and writing English,
✓		✓		Zip code	Home? Work?	Live or work in the Chicago metropolitan area, and
	✓			Interpersonal Violence	Modified DVERS instructions to serve as a single dichotomous item: <i>Many people experience violence at some point in their lives. Experiencing violence for this study can mean being emotionally, physically, or sexually hurt by someone you know or did not know. Using this definition, have you ever experienced violence in your life?</i>	Experienced interpersonal violence
			✓	CPP history	Have you ever experienced ongoing pain below your belly button (abdominal/pelvic area)? If yes, when? Select from the timeframe of options. If yes, did you visit a clinician for your pain?	Yes, I have experienced ongoing CPP in her lifetime.
			✓	CPP current	During the past six months, have you experienced pain below your belly button (abdominal/pelvic area)? If yes, does the pain typically occur during your menstrual cycle? Select yes or no. If yes, how long have you been experiencing ongoing pain below your belly button (abdominal/pelvic area)? Select from the timeframe options.	
			✓	CPP over the life course	Compared to your earlier years, how much better or worse is your CPP? For each life course group listed (11-17; 18-25; 26-44; 45-50; 51-61), select the best option: "much better," "better," "somewhat better," "about the same," "somewhat worse," "worse," "much worse."	

TABLE XXIV.
OVERVIEW OF SCREENING QUESTIONS (Continued)

			√	CPP and coexisting conditions diagnosis	Has a doctor ever diagnosed you with any of the following conditions or symptoms? Select all that apply. CPP; endometriosis; IB; IC/BPS; PFD; dysmenorrhea; pelvic congestion (syndrome) or adhesions; vulvodynia/vulvar pain syndrome. If yes, when? List year(s). Do you have a record of the diagnoses? Which condition(s)?	
			√	Interpersonal violence before the onset of CPP	Use the timeframe of reported life course interpersonal violence experiences and CPP experiences.	Experienced CPP after the first interpersonal violence occurrence
	√			Distress level	Kessler 6 (K6) is a six-item distress inventory designed to screen for the likelihood of significant psychological symptomology (Kessler et al., 2002). I set the exclusion criteria quite high because the distress for women who have experienced interpersonal violence is generally high.	Permitting women with K6 scores under 20 to enroll (Kessler et al., 2002; Saint Arnault and O'Halloran, 2016)
	√		√	Healing interpretation	Open-ended questions: (1) Have you experienced relief from your CPP? (2) If yes, briefly describe. (3) Briefly, how do you characterize your CPP journey? Clarify if needed: Did you once have CPP and no longer experience it in your daily life or only sometimes experience it? Do you continue to have consistent CPP?	Assess whether she is in her healing journey.
√		√		Education	What is the highest grade or year of school you have completed? Select from options.	
√		√		Discrimination	The <i>Expanded Everyday Discrimination Scale</i> (Williams et al., 1997, 2008)	

following interview. The interviewer plans to balance carefully, allowing for enough openness to tell their experiences and focus on letting the interview structure work to answer the research questions (Seidman, 2013). This interview schema involves three 60-90-minute interviews with each participant, 5-10 days apart, about their lived experiences. Table XXV displays the structure of the three series of in-depth phenomenological interview approaches, combining the mapping activities and types of questionnaires linked to this study's specific focus. On their own, in interview 1, the co-researcher participants will provide a first-person account of their experiences and reflections relating to their lives before CPP and after CPP. During interview 2, they will engage in body mapping, community, and social network mapping while describing details of their CPP recovery trajectories, focusing on healing experiences. In interview 3, they will reflect on meanings about their journeys, experiences, and ecosocial context.

The primary aim of phenomenological inquiry is to collect experiences of the phenomenon of study and reflect on their meanings (van Manen, 2016). Empirical and reflective phenomenological inquiry activities help elicit data on the phenomena and their meanings. Empirical inquiry explores the range and varieties of pre-reflective experiential material relevant to the studied phenomena (Van Manen, 2016). Pre-reflective experiential material is the direct experience or what naturally occurs in the activity. It presents as a "non-reflective type of consciousness" (van Manen, 2016, p. 38) and often reveals itself as states of "being" (see van Manen, 2016, p. 38), action (e.g., listening to one's breath; lifting pelvis; running; standing; writing; painting; reading; laughing), cognitive activities, and "inner gestures" (e.g., "thinking, feeling, becoming aware") (Valenzuela-Moguillansky and Vásquez-Rosati, 2019, p. 128).

Pre-reflective experiential material is elicited by interviewers using a phenomenological technique, prompting them to focus on concrete experiences, not subjective (i.e., attitudes and opinions) practices. For example, Seidman (2013) recommends asking participants to reconstruct their

TABLE XXV.
PHENOMENOLOGICAL THREE IN-DEPTH SERIES OF INTERVIEWS WITH MAPPING APPROACH

Type of Interview	Purpose	Types of qualitative data elicited	Support Aims & associated concepts that may materialize
(1) Focused life history <ul style="list-style-type: none"> • <u>The body map</u> (current) • an option for the <u>inclusion of primary artifacts or documents</u> • <u>Questionnaires</u>: Structural drivers and SDOHs; pain interference; depression; anxiety; healing; resilience; embodiment 	<p>Following the oral history tradition, gather a rich, in-depth account of personal experiences and reflections on what life was like before CPP and their life after CPP entered their lives (Seidman, 2013).</p> <p>Use the body map as an open-ended technique to allow the co-researcher participant to describe her own experience and establish a baseline for how she feels in the present.</p>	<ul style="list-style-type: none"> • Deep understanding of contextual factors, their interactions, and social processes • Relationships with social ecology • Possibly pre-reflective data and reflective 	<p>Aims 1, 2, 3</p> <ul style="list-style-type: none"> • Embodiment • Sources and expressions of resilience, maybe healing or health • Life course • Ecological perspective • Intersectionality
(2) Details of the experience , including <ul style="list-style-type: none"> • <u>the body map</u> recalling CPP during the (a) onset of symptoms and (b) during the most heightened, intense, or severe CPP period • <u>the body map</u> connects to the <u>community map</u> for spaces/places/people/activities where relief/recovery/healing/restoration occurred • <u>“Grand tour” social network map</u> 	<p>Details of their recovery trajectories, focusing on healing experiences</p>	<ul style="list-style-type: none"> • Pre-reflective data (i.e., states of being, action, inner gestures) • Micro-phenomenological data about moments from healing experiences (embodied cognitive processes) • Perceptions, meaning-making data, lifeworld dimensions 	<p>Primarily Aim 1, Aims 2 & 3</p> <ul style="list-style-type: none"> • Embodiment • Sources and expressions of resilience, maybe healing or health • Life course • Ecological perspective • Intersectionality across cases
(3) Meaning-making	<p>Reflections to discover meanings about their recovery journeys, experiences, and ecosocial context/elements</p>	<ul style="list-style-type: none"> • Perceptions, meaning-making data, lifeworld dimensions • Social processes • Relationships with social ecology 	<p>Aims 1, 2, 3</p> <ul style="list-style-type: none"> • Embodiment • Resilience, maybe healing or health • Life course • Ecological perspective • Intersectionality

(Seidman, 2013)

experiences (*What happened? What was it like?*) as opposed to recalling (*What do you remember?*) to minimize recall bias and focus on the events and moments as close to as experienced as possible. Asking directly about memory adds a layer to the cognitive process, thus entering the possibility for non-pre-reflective material to surface. The interviewer will invite the co-researcher participants to bring primary artifacts or documents representing their healing experiences to facilitate memory recall and offer a supplemental way to express their experiences. It is an opportunity to integrate these items into their experiential descriptions. These are suggested options and are voluntary. The study team lead will explain this during the scheduling call and in the interview guidance. Books, objects, artwork, photographs, poetry/media, audio clips, and exercise materials are examples. Pre-reflective experiential material generates descriptive data of experiences and moments contributing to the phenomena.

Reflective inquiry activities aim to interpret the aspects of meaning related to this phenomenon (Van Manen, 2016, p.78). The lifeworld dimensions offer reflective meaning and pre-reflective data; they “can be differentiated, but not separated” (van Manen, 2016, p. 105). Meaning-making may link the cognitive, emotional, embodied, and perhaps behavioral connections between the participants alleviating CPP experiences and their life. It offers insights into connections to other lifeworld phenomena. Over time, these experiences and reflections of meaning will collectively describe healing journeys across the participants’ social ecologies.

The data quality relies on the co-researcher participants maintaining agency, their complete conscious account, and their voice. Sociologists Hammersley and Atkinson (2007) underscore that agency and consciousness are necessary for sharing narratives of selves within their environmental context. The interviews are in-depth, maintain minimal questioning by the interviewer, and are interactive. The interviewer assumes a second-person perspective. The dialogue between the co-researcher participant and the interviewer generates constructed narratives (Høffding and Martiny, 2016). Reciprocity is the fundamental action occurring in the second-person perspective (Zahavi, 2015).

j. **Qualitative measures: The interview structure**

i. **First interview: Focused life history**

During Study Visit 1, the interviewer and the co-researcher participant will complete the first interview. This visit will be 90 minutes long, allowing 30 minutes to complete the questionnaires. The purpose of the focused life history interview is to gather a rich, in-depth account of personal experiences and reflections, like oral history interviews (Seidman, 2013; Oral History Association, 2018). The 60-minute interview allows the participant to tell their story to the fullest. This interview differs because it seeks to discover as much as possible about the participants' context leading up to and surrounding the experience (Seidman, 2013). The interview guide includes a few prompts to orient the co-researcher participant to the study objectives. Following the tradition of oral history interviewers, the trained co-researcher lead (interviewer) balances the study's objectives and perspectives of the participants. Together, the co-researchers will explore *the co-researcher participants' lives before CPP and what their lives were like after CPP came into their lives*. The interviewer will probe to see if a deeper dive is warranted. At the same time, co-researcher participants should respond to prompts in their voice and style, including addressing issues that reflect their concerns (Oral History Association, 2018). This interview style gives the participant the reign to share her story as she experiences it. It reduces the opportunity for the interviewer to make assumptions about the role and effects of interpersonal violence, trauma, and embodiment while building trust. Given the sensitive nature of interpersonal violence and the temporal nature of trauma effects on some people (i.e., memory repression, dissociation, agitation), this style fosters space to hear what was in the co-researcher participant's context – her social-ecology before CPP and after CPP. Next, the study lead will ask the co-researcher participant to fill out a body map as an open-ended technique to allow the co-researcher participant to describe her own experience and establish a baseline for how she is feeling in the present (Saint Arnault and Shimabukuro, 2012; Berghmans and Bols, 2015; Brett-MacLean, 2009;

MacGregor, 2009; Scorgie et al., 2017). “Pain mapping” is often used in the CPP clinical experience (Berghmans and Bols, 2015). The co-researcher study lead will prompt the participant to fill out the body map by stating, *please sit quietly, feel, and picture yourself in the last couple of weeks. Think about how you have felt. Now, thinking about the last two weeks, please draw how you have felt on this body and how you have felt mentally, physically, socially, and spiritually*. The co-researcher participant spends 5-10 minutes filling in their body map. *Please walk me through your body map / describe your images if you are comfortable*. Saint Arnault and Shimabukuro (2011) recommended this prompt in their Clinical Ethnographic Interview (CEI) with people who experience distress. The study lead will ask the participant to complete the questionnaire series after the interview.

ii. **Second interview: Details of the experience**

The second interview focuses on the concrete details of the co-researcher participant’s lived experiences comprising the phenomenon (Seidman, 2013). This interview focuses on their detailed experiences of alleviating CPP symptoms across time and social ecology. The basic questions query the onset of CPP symptoms during CPP and after CPP. The interviewer guides the co-researcher participant to describe the experience as much as possible as they lived through it. The interviewer steers the participant from abstract interpretations, generalizations, and explanations to encourage the participant’s reflective conscious accounts of their experience (van Manen, 2016). For example, the interviewer’s empirical and reflective prompt, *“Tell me about,”* may prompt participants about “being” states and capture vivid sensory details and inner gestures, such as how your body/pelvic area felt; *describe your sensations*.

The study lead offers three different time points for the co-researcher participant to fill out a body map: onset of CPP symptoms, most intense/severe CPP symptoms, and when experienced relief from pain. In conjunction with the body map, the co-researcher draws a community map to identify the spaces/places where the relief occurred and labels the people/types of relationships and activities

(Parker, 2006; Scorgie et al., 2017; Stack-Cutler et al., 2017). The study lead prompts, *thinking about what you just illustrated on the body map, when you felt relief* (or use the language reflective of her specific experience), *please map the spaces/places where your relief/terms reflective of her specific experience occurred. This is not a cartographic map. You can make a map of your community/neighborhood/city and circle the spaces where you experienced relief. Then, draw or label the people/relationship to the people you were with and what activities occurred. Alternatively, you can simply represent all these spaces without marking the other spatial landmarks. Please make sure to label the people/relationship to the people you were with and what activities took place. Include social media and Internet spaces, if relevant.* Next, the co-researcher will focus on how she feels about her CPP and her relief over the past six months, months, and last week.

Lastly, the study lead will ask the co-researcher to give a “grand tour” of their social network (Saint Arnault and Shimabukuro, 2011, p. 311). *Please describe a typical week. Probes: Tell me about your activities or roles in your family, work, and communities. Describe how you felt. How were your roles affected by social expectations of others, expectations of yourself, and if these expectations changed recently? Please draw a “Grand Tour” of your social network. Begin by drawing a circle of those closest to you and draw all the people or groups you interact with during a typical week. Write the places(s)/space(s) where the interactions typically take place (e.g., home, church, community center, school, work, community garden, bike path, gym, doctor’s office, Instagram, Tik Tok, Twitter, Facebook, YouTube, or other social media or internet groups, if that is common in your typical week).* Present sample. Finally, *please tell me about your social connections if you are comfortable. How do these social connections and interaction spaces impact your daily health and well-being*

iii. **Third interview: Reflection on the meaning**

In the third interview, the interviewer prompts the co-researcher participant to reflect on the meaning of their experience. Shultz (1967) captures the essence,

“meaningfulness does not reside in the lived experience itself, but it is the ‘act of our attention’ which brings experiences that would otherwise be simply lived through our ‘intentional gaze’ and opens the pathways to meaningfulness” (pp. 71-72). Creating space for participants’ reflection increases data trustworthiness and credibility (Seidman, 2013) and is consistent with trauma-informed approaches (TIA) and feminist methodologies (See Chapter IV, Aim 3).

The interview focuses on subjective experiences, asking about attitudes and opinions. Making meaning encourages participants to observe and describe in detail how factors in their lives interacted and the context in which this occurred to lead to their present situation (Seidman, 2013). The questions in this interview focus on the content of the two previous interviews and emphasize meaning-making.

k. **Quantitative measures**

The concepts for the quantitative measures follow Branch 4 of the Anti-Oppressive Praxis for Community Health Equity Trauma research.

4. **The study’s data management, preparation, analysis, integration, and interpretation**

a. **Data management and preparation for qualitative analyses**

Immediately following each interview, the interviewer uploads audio recordings to the protected university Box account and deletes the file from the digital audio recorder. Verbatim, orthographic transcription will occur by professional transcription services. Verbatim, orthographic transcription comprises sounds and marks part of the spoken language (Valenzuela-Mogillansky and Vásquez-Rosati, 2019, p. 127). The interviewer will review the transcript for accuracy, redact references to specific individuals (replacing with pseudonyms) and settings, and add particular gestures in parenthesis that the co-researcher participant makes to describe an aspect of the experience.

TABLE XXVI.
QUANTITATIVE MEASURES

Structural SDOHs	Intermediate SDOHs	Intersectional Characteristics	Health Outcome	Variable	Rationale for Inclusion	Source
	√			Household income	Intersectional Characteristics. Supports Aim 3.	
	√			Type of housing	Intersectional Characteristics. Supports Aim 3.	
	√		√	Interpersonal violence before the onset of CPP	Eligibility criterion	Modified DVERS (Grasso, 2016)
√				Language	Eligibility criterion	
				Transportation barriers, food insecurity	Intersectional Characteristics. Supports Aim 3.	
			√	Resilience	Addresses Sub aim 1.4	<i>Conner-Davidson Resilience Scale (CD-RISC-10)</i> . (Campbell-Sills and Stein, 2007; Davidson and Connor-Davidson, 2017).
√				Sexual identity	Eligibility criterion	
√		√		Sexual orientation	Intersectional identity characteristics	
	√		√	Symptoms of Anxiety	Supports Aim 3.	Generalized Anxiety Disorder-7 (GAD-7) (Radloff, 1977)
	√		√	Symptoms of Depression	Supports Aim 3.	Centers for Epidemiologic Studies-Depression [CESD-10] scale (Radloff, 1977)
			√	Pain Interference	Support Aim 1, sub aim 1.1, and Aim 3	PROMIS.
√		√		Zip code	Eligibility criterion	

Upon completion of the accuracy review, the interviewer automatically numbers each line of the whole document to maintain a reference to the original order of the interview and locate the different expressions used to exemplify each category in the initial interview (Valenzuela-Moguillansky and Vásquez-Rosati, 2019). The interviewer attaches their field notes to the transcription and uploads the entire document to the university Box account and Atlas-ti, an online platform for qualitative data analysis.

b. **Hermeneutic phenomenological data analysis and interpretation**

The phenomenological analysis seeks to present a textual description of a phenomenon, as closely as it occurred at the moment, and the meaning connected to the experience (van Manen, 2016; Dahlberg et al., 2008; Vagle, 2016). A hermeneutic phenomenological analysis fits well to grasp and describe the participants' healing experiences as closely as they experienced it within their contexts and their reflected meanings (van Manen, 2016; Dahlberg et al., 2008; Vagel, 2016; Seidman, 2013). The balance between identifying themes linked to concepts and arriving at pre-reflective experiences is essential. Phenomenological descriptions and interpretations should closely align with the co-researcher participants' accounts. There are several iterative steps and techniques for analysis and interpretation. Although the steps are in order, the analyst and interpreter team must remain open to the data and move more iteratively and fluidly across the steps. During the analysis, I aim to capture the various features comprising the structure of healing and resilience (van Manen, 2016).

I will also pursue understanding intentionality, the directed awareness of the co-researchers' relationship with their lived experiences (Dahlberg, 2006) with CPP, and alleviating CPP across time and space. Openness and alertness to the data are the primary approaches to analysis to increase credibility, and it is recommended that the meanings and connections evolve from the systematic and careful examination (Dahlberg, 2006; Dahlberg et al., 2008).

The natural attitude or pre-reflective experiential material is a tool for openness and alertness. Dahlberg (2006) describes the natural attitude as understanding using naivety and the bridling technique. Bridling data has its roots in bracketing. The act of bridling helps to place the pre-understandings aside to the extent possible. The term bridling represents that researchers cannot simply remove or block their understandings and interpretations, yet must recognize, note, and suspend our pre-understandings to allow the healing and resilient experiences to present themselves in the most authentic, non-judgmental, and open way possible. A hermeneutic phenomenological reflection is an approach recommended by van Manen (2016) to try to grasp the meaning among survivors of interpersonal violence living with CPP and finding relief from CPP across time and space. This approach supports the researcher in crafting a text compromised of the structure of meaning. This approach offers several ways to identify themes or meaning units within the transcripts, particularly in the “whole-part-whole” analytical technique (Vagle, 2016; van Manen, 2016).

Always think about focal meaning (i.e., moments) about the whole (broad context) they are situated. Once we remove parts from one context and put them in dialogue with other factors, we create new analytic wholes that have particular meanings about the phenomenon (Vagle, 2016, p. 96-97).

See Table XXVII identifying the hermeneutic phenomenological analysis and interpretation steps.

c. **Grounded theory method, combining directed content analysis**

The GTM, combining DCA, will be guided by anti-oppressive praxis for community health trauma research. Grounded theory method is “a systematic, inductive, and comparative approach for conducting an inquiry to construct theory” (Bryant, 2014, p. 125). This study is interested in constructing a social-ecological healing theory and a social-ecological resilience theory among survivors of interpersonal violence with CPP and gaining insights into the ecosocial context. Directed content analysis is well-suited for methodologies that draw from theoretical interpretative frameworks.

TABLE XXVII.
STEPS FOR HERMENEUTIC PHENOMENOLOGICAL ANALYSIS AND INTERPRETATION

1.	A holistic reading of the entire text	Acquaint yourself with the data without taking notes. Once complete, ask, "What sententious phrase may capture the fundamental meaning or main significance of the text as a whole?" (van Manen, 2016, p. 92).
2.	First line-by-line reading	Take careful notes and mark excerpts (Vagle, 2016). Use the following techniques: (a) Highlight yellow the statements or phrases that seem essential or revealing about the description of the phenomenon or experience (van Manen, 2016, p. 94). (b) "Place parentheses around large chunks of text and make margin notes that might be questioned (ex. How does this influence recognition of understanding?) at times and statements (e.g., potential meaning, "having an idea in your head") at other times" (Vagle, 2016, p. 97). (c) Circle conceptual comments that engage at a more interrogative level (Smith et al., 2009). (d) Highlight in green the linguistic comments on the specific use of language (Smith et al., 2009). (e) Bridling (Dahlberg, 2008), journal to "harness what is being read and thought, does not mean to set aside own presuppositions, but it does mean to try to own them and to interrogate how they might influence the analysis" Vagle, 2016, p. 97).
3.	Craft a profile for each participant (Seidman, 2013; J. A. Smith et al., 2009)	Feature-focused life history, details of experience, and reflection of meaning in a chronological account focused on initial emergent themes or meaning units to support comparison across participants and groups (recovered from CPP vs. CPP).
4.	Follow-up questions	Read other transcripts similarly and review the highlighting and margin notes to create follow-up questions for each participant. The questions will clarify emerging intentional meanings (Vagle, 2016).
5.	Second line-by-line reading	Articulate the meanings based on each participant's markings, margin notes, and follow-up questions. Then I will create a new document with all the potential parts that may contribute to the phenomenological text (Vagle, 2016).
6.	Third line-by-line reading	Express analytic thoughts about each part for each participant (Vagle, 2016). The participant profiles will also be reviewed and modified.
7.	Subsequent readings across each participant's data and profiles	Look for meaningful units. Provide preliminary titles to meaning units. Remove and add analytic thoughts.

The DCA analytical approach offers a systematic process for creating context-based inferences from the data (Elo and Kyngä, 2008; Low et al., 2019). In DCA, the researchers develop deductive coding from the constructs comprising the theoretical frameworks (Charmaz, 2006; Charmaz and Henwood, 2007). The co-researcher analysts and interpretative team will engage in DCA to develop grounded theory drawing from the following three theoretical frameworks: (1) Ecosocial Context of Interpersonal Violence and CPP constructs, including the four conjoined embodiment constructs, life course, historical and intergenerational context, structural drivers and SDOH inequities, social-ecological levels; and the political-economic processes of production, exchange, consumption, and reproduction (Chapter III); (2) six domains of intersectionality analysis: social inequalities (layers of complexity); power dynamics/relations; relationality; social context; complexity; and social justice (Hill Collins and Bilge, 2016); and (3) ecological perspective, which involves the four ecological process of interdependence, cycling of resources, adaptation, and succession and the ecological metaphor that includes five main principles – “the five ‘C’s”: contextualist philosophy, community as a multi-level concept, culture, and diversity as critical community-defining concepts, and collaboration (Trickett, 2019, p. 207-208).

My intention in applying the intersectionality analysis interpretive framework is to bridge the higher-level macro-dynamics of ecosocial theory with everyday expressions relating to the study phenomena, such as violence, trauma, healing, resilience, health, and CPP. The ecological perspective and metaphor originated from an ecosystems lens. Trickett (1995) applied it to studying adversity and resilience from traumatic life events, such as natural disasters. The findings and process help researchers and collaborators develop community health promotion and prevention activities that build on a communities’ local assets, culture, history, values, norms, and current context.

The GTM encourages constant interaction with the data while remaining consistent with their emerging analyses. Bryant (2014) explains that data collection and analysis move forward

simultaneously, informing and streamlining each other. Incorporating the field notes and the debriefing session is an example of this process in action.

Upon completion of the hermeneutic phenomenological analysis, a codebook will begin. The first step is to start the codebook, establishing codes, using terms and definitions directly from the theoretical constructs to explore the research questions (Assarroudi et al., 2018; Low et al., 2019, p. 3117). They need further elucidation and description, particularly regarding ecosocial and social-ecological context, relational dynamics, and social processes. This experience will assist researchers in identifying emerging insights related to (a) the lived experience of CPP, recovery, and healing across the life course; (b) ecosocial and socioecological contextual factors and pathways shaping trauma, CPP, and healing experiences; and (c) perceptions of interactions among trauma, CPP, health, resilience, and healing. The codebook cannot be developed until this phase to increase the co-researcher analyst and interpretative teams' openness to the data, reducing bias and increasing reliability during the hermeneutic phenomenological analysis.

The second step is going through each transcript in Atlas-ti, line-by-line to apply deductive coding—the pre-set coding schemes associated with the theoretical constructs recorded in the codebook to related data. The third step involves scrutiny of the data—a line-by-line iterative inductive open coding and memoing to capture data elements (Bryant, 2014). The goal is to reduce complexity by providing fewer abstract terms and concepts. Line-by-line coding helps to make connections between codes and advance the analytic level of emerging analyses. Specifically, it supports the analysts' engagement with the data and deductive codes, encourages ideas, and shifts from descriptive topics. Conduct line-by-line coding until a list of codes and definitions fits the data and presents something significant. Add these codes and definitions to the codebook.

Coding offers a way to recognize the co-researcher participants' implicit knowledge, meanings, and actions further to explore data collection (Charmaz, 2015). I aim to open these data to more

profound and analytical readings. Analysts ask these questions: *What is happening in this datum fragment? What are the actions and meanings, in short, direct terms? How does the data relate to research questions and theoretical frameworks?* It evokes attention to each piece of data and drives analytical thinking about its implications (Charmaz, 2015; Glaser, 1978). Develop codes that may be useful in developing an explanation, a model, or a theory of ecosocial or social-ecological healing and resilience (A. Bryant, 2014). A significant step toward advancing theoretical analysis occurs throughout the coding process by separating meanings and actions (Charmaz, 2015; Sbaraini et al., 2011). Glaser (1978) and Charmaz (2015) recommend the use of “gerund phrases,” which use the noun form of the verb, to develop codes (p. 1616). Gerunds help to focus the attention of the research on the processes and actions that, in part, constitute the social context (Bryant, 2014) and may help identify how “individual codes fit together and where they lead” and detect tacit processes and meanings (Charmaz, 2015, p. 1616). Coding sorts and summarizes batches of data, all the while forming “the skeleton of an analysis” (Charmaz, 2015, p. 1615).

The study team pursues memoing throughout the coding process. In short, memos are where the researchers record their ideas and reflexivity. In step three, memos may take unstructured notes and comments about the researchers’ experiences using the method and preliminary results (Bryant, 2014). The researcher should mediate the research questions with the data and initial codes. Coding may elicit researchers’ experiences, beliefs, and preconceptions into the foreground. Recognizing this and further exploring this through the memo process is a way to practice reflexivity and ponder potential connections to the data and research questions.

In step four, the research team moves from numerous open codes toward a “narrower set of higher-level codes that encompass the richness of the source materials” (Bryant, 2014, p. 130). These higher-level codes are “parent” codes and often contain the initial or modified “child” codes. The researcher should have the readers in mind and prepare text that could be published or disseminated.

Thus, the analysts formalize the memoing language (Bryant, 2014). “Data interpretation is an iterative and reflexive process for deriving meaning, making theoretical connections, constructing explanatory frameworks, and drawing relevant and credible conclusions supported by the data” (Low et al., 2019). It continues as an open-ended inductive process involving all co-researcher leads who can participate in analysis and interpretation.

By the fifth step, the analysts would document emerging insights. Further theory development is likely necessary. Theoretical sampling aims to develop the theoretical categories (Charmaz, 2006). The next step is determining what data types will further develop the theories (Glaser and Strauss, 1967). Charmaz (2006) recommends seeking a sample of data, including people, events, or information, that directly reveal and define the boundaries and relevance of the theoretical categories. In sample selection, analysts should “search for evidence that might uphold, enhance, or undermine the initial ideas generated from the earlier findings” (Bryant, 2014, p. 131).

d. **Quantitative analysis**

Validated scales will be scored. Descriptive analyses of the screening and questionnaire characteristics and outcomes will include means, medians, interquartile ranges, minimums, maximums, and standard deviations for continuous variables and frequencies for categorical variables.

Mixed methods research analysis involves the integration of qualitative and quantitative data. To respond to sub-aim 1.4, I will discern whether and describe how the qualitative themes agree, expand, or diverge with the results from the self-report measures from the CD-RISC 10 (Campbell-Sills and Stein, 2007), the Self-Integration Scale version 2.1 (Meza and Fahoom, 2008), and the EES (Piran et al., 2010). To support aim 3, I will merge the participant SDOH and health-related characteristics with the narratives.

e. **Assessing data trustworthiness**

Table XXVIII defines the strategies I used to ensure trustworthiness. I adapted the template developed by Korstjens and Moser (2018), who based it on Lincoln and Guba (1985) and Sim and Sharp (1998).

f. **Ethical considerations**

I will submit a study protocol application for approval of human subjects research from the University of Illinois Chicago (UIC) Institutional Review Board (IRB). I will assign a unique identification number to each questionnaire and screening form to protect privacy and confidentiality. The co-researcher participants will use pseudonyms during their interviews. Participants will be asked to provide verbal informed consent before answering the screening questions and written informed consent before participating in the three-series interviews and responding to the questionnaires. Precautions will ensure privacy and confidentiality are maintained during data management.

5. **Discussion**

A flourishing body of research applies post-positivist methods to studying interpersonal violence, including ACEs, IPV, and SV, as risk factors for long-term health conditions, including CP and CPP. Although this evidence advances our understanding of interpersonal violence, particularly ACEs, this research generally detaches from health equity frameworks (i.e., ecosocial theory, intersectionality analysis, strength-based methods, anti-oppressive praxis) and systems theory perspectives (i.e., ecological perspective, research practices as events in systems to promote health equity). Such fragmentations limit research capacity to capture real-world complexities that may be valuable in planning and implementing multi-social ecological level health promotion and prevention programs, policies (and timely) pedagogical insights for working with these diverse sub-communities.

TABLE XXVIII.
STRATEGIES TO VERIFY TRUSTWORTHINESS IN QUALITATIVE RESEARCH

Criterion	Strategy	Definition of strategy	Time-Series Interviews	Self-Report Questionnaires	Praxis with CAB
Credibility	Prolonged engagement	Extended engagement with co-researcher participants and CAB members to build trust and familiarize self with the context and culture and gather rich data.	✓		✓
	Persistent observation	Identifying the most relevant characteristics and components, which include features of the embodied nature, perceptions, meaning-making and ecological context of healing and resilience across life-course.	✓		✓
	Method triangulation	We are integrating qualitative and quantitative measures.	✓	✓	
	Investigator triangulation	Two or more researchers will make coding, analysis, and interpretation decisions. Investigators will present the data analysis and interpretation process with the CAB and integrate their input into the subsequent analysis and interpretation phase.	✓	✓	✓
	Member check	We are reviewing the data and sights with the original study participants.	✓	✓ (Sub aim 1.4 and Aim 3)	
Transferability	Thick description	Describing the social-ecological context, behavior, experiences, and reflections so that it illuminates meaning to the reader	✓	✓ (Aim 3 merge intersectional experiences)	
Dependability and confirmability	Audit trail	Reporting and records of the research steps carried out	✓	✓	✓
Reflexivity	Journal and memos	Exploring my epistemology, ontology, assumptions, and how this influences my research decisions	✓	✓	✓

Adapted from Korstjens and Moser (2018), p. 121.

To produce unique knowledge, I attempt a novel, hypothesis-generating, transformative, and participatory research praxis. I propose an anti-oppressive, convergent mixed-methods dissertation study and seek a community health science contribution to the ecosocial (Graves and Nowakowski, 2017) and ecological (Trickett, 1995, 2009, 2019) exploration of healing and resilience among female-identifying/ciswomen co-researchers with a history of interpersonal violence and CPP in Chicago. The goals of potential data generated from this pilot attempt to contribute to the following:

First, to carve out space for knowledge-building and hypothesis testing around the areas of trauma, interpersonal violence, CPP, and related pelvic area symptoms and conditions overlapping physical and mental health conditions, resilience, and healing as part of a larger, swiftly advancing public health social-ecological systems priorities, such as the Building Community Resilience (BCR): the process of assessment and readiness (Ellis and Dietz, 2017) and The Empower Action Model (Srivastav et al., 2020). Chronic pelvic pain, related pelvic area issues, COPC, trauma, and even correlated substance use disorders have slid under the radar for far too long. As problematized in my dissertation, the lack of public health research relating to CPP, bowel and gut-axis health, and bladder health and its intersections with interpersonal violence and traumatic stress coupled with the lack of lived experience research centering on the lived experiences, perceptions, and meanings from survivors with a history of CPP among other health science disciplines research is a structural and institutional dynamic of oppression. These systems of oppression may contribute significantly to the embodied trauma and CPP experienced by survivors.

Second, to provide pedagogical insights for diverse stakeholders for immediate use and multi-level health promotion intervention and prevention mapping and planning. Given the relevance of these interpretations and dissemination packaging, stakeholders affiliated with multi-level roles and positions may integrate some of this knowledge into their encounters with women. For example, these may include (a) a strengths-based, whole-person health or mind-body education insights and resources for

interpersonal violence survivors by highlighting underdeveloped synergies: Chronic pelvic pain, related-pelvic area, and mental and physical health, within the TI, social-ecological context, and restorative frameworks (contrasted to the deficit, based, individual or interpersonal framing, of psychological and physical health behaviors or causes). Targeted examples: directly to women survivors; allies, advocates, social workers, shelters, school nurses, criminal justice settings, somatic practitioners, counselors, higher education support staff and faculty, and medical educators. (b) Health practitioners support women with CPP experiences by demonstrating supportive CPP interventions from the clinic setting, illuminating and comparing healing experiences and factors outside of clinic settings, and increasing trauma-specific and strengths-based knowledge about CPP, trauma, interpersonal violence, healing, and resilience within a social-ecological context, applying an intersectional lens. (c) Community participatory planners and local (or virtual) wellness businesses, non-profits, and CBOs to draw upon during the development or enhancement of social, physical, and virtual restorative spaces and activities for trauma survivors; multi-level participatory health promotion and prevention mapping combining IPV and community resilience best practice national and local data (see Centers for Disease Control, 2019).

Third, to support the hypothesis of generation of embodied healing and resilience by developing grounded theory. To offer an interpretative analysis of the qualitative accounts of embodiment, resilience, and healing compared to the validated self-report measures to support possible tool refinement. Finally, to compare the healing experiences from a specialized clinic community to women recruited from community spaces.

6. **Limitations**

The presented protocol is the first study to address the lack of health equity conceptualization in the study of interpersonal violence and health, broadly, and CPP, using an anti-oppressive praxis MMR strength-based approach. Praxis includes TI interactions, study materials, and

design. It elucidates how to involve survivors of interpersonal violence and their allies in the research process and post-study translated to action.

A limitation is the resources it will take to implement the study protocol (i.e., the number of interviews and several types of analysis). However, collaborating with other community health researchers and community experts will offer opportunities to improve study and data trustworthiness (see Table XXVIII). Further, we can adapt the protocol to fit the context better and advance the anti-oppressive and TI-praxis. Finally, onboarding more folks may begin to normalize the integration of health equity concepts into the study protocol and research process.

Concerning conducting two different types of qualitative analyses, this is time-consuming. However, by piloting this approach (the next step), we can assess it. For example, do we obtain different data responding to the research questions? We can learn how much hermeneutic phenomenological analysis offers social-ecological or ecosocial insights. This can support whether DCA combined with DCA is a necessary addition to future studies.

Another limitation is that I did not member-check this study protocol with a community of survivors of interpersonal violence with a history of CPP. However, it did undergo a rigorous review by my Dissertation Committee, experts in health and social inequity, and women's health and social determinants. In the grant application process, I plan to invite survivors and their allies to participate in the CAB and will ask for and integrate their insights into the study protocol.

7. **Conclusion**

The study protocol, an anti-oppressive convergent phenomenological MMR study of healing and resilience among women survivors of interpersonal violence with a history of CPP, is a strength-based approach to studying CPP and interpersonal violence, contrasting sharply with the existing CPP and abuse literature. The protocol intentionally selected the three-series phenomenological interviewing approach to allow for time to build trust between the co-researcher participant and the

interviewer, privilege their voice and narrative, and create a safe space for the phenomena to let itself known. The approach allows for an unraveling of the lived body to emerge. It permits a dialogue for the predominant and subtle complexities, power relations, supportive relations, praxis, strengths and opportunities, challenges, and barriers across their life course in context to emerging.

A follow-up study could use the findings from the MMR integration of the phenomenological themes compared to the self-report results of the EES, Integration of Healing, and CD-RISC-10 scales to design social-ecological scales of embodiment, healing, and resilience. Future research could use the findings to create more focused studies on the phenomena's essential aspects to assess transferability.

C. **Aim 3: Participatory Development of Research Guidance for Interacting with Participants, Collaborators, and Researchers with Trauma Awareness**

1. **Abstract**

a. **Aim**

This study aimed to engage in participatory explorative research with co-researchers, Trauma Informed Approaches (TIA) best practice, grey literature, and my archival field notes in informing guidelines for interacting with co-researchers and collaborators with trauma awareness in a research context.

b. **Methods**

I applied the Anti-Oppressive Praxis for Community Health Equity Trauma Research Framework, and relational processes, toward this study's aim and methods. This exploratory, participatory action research study engaged co-researchers in virtual Co-Researcher Debriefs (CRD), an adapted focus group methodology approach. Thirteen co-researchers participated. I analyzed and interpreted the CRD data using an inductive approach to thematic analysis. I integrated multiple data triangulation by using the trauma-informed approach grey literature and archival field notes to inform

my analysis. I focused on the research question: what are evidence-informed recommendations for TI interactions among co-researchers, participants, and collaborators in a research context?

c. **Results**

Data triangulation illuminated the meta-theme, TI research confronts oppressive research structures and practices and toward restorative processes and interactions. The following six themes emerged in the CRD analysis and interpretation: 1) The nature of oppressive, traditional research practices: “I am managing a level of oppression” and a victim of an oppressive system; 2) “strength-based” praxis: “everyone experiences trauma” and “no matter the focus of the research, there may be a possibility that someone will bring up a traumatic experience”; 3) the core feature of TI research is safety: “do not inadvertently do harm” and researchers proactively foster safe spaces and learn how to respond to varying degrees of distress; 4) planning TI research foundational training with experts from the community that the research project seeks to engage and academia; 5) how to engage with trauma awareness? Embrace a learning and caring mindset with others and oneself; and 6) who and what to include in the research process? Preparing the grant application and study project protocol: considering human capital, budget, and timelines.

2. **Introduction**

a. **Relational processes are integral to research praxis**

The organizing research framework, Anti-Oppressive Praxis for Community Health Equity Trauma Research (CHET-Research), emphasized relational processes (branch three) as integral to research praxis and centers promotion of positive embodiment among communities exposed to trauma (see Chapter IV, Aim 1). Qualitative, mixed methods research (MMR) and place-based methodology involve interactions with multiple researchers, collaborators, and study participants across time and place. Community-engaged research (CER), community-based research (CBR), or community-based participatory research (CBPR) categorize such research. Focusing on relational processes in

context can improve opportunities for research collaborations and participant recruitment, enrollment, retention, and collecting of quality qualitative and MMR data, particularly with communities impacted by trauma and embodiment experiences (e.g., affecting health). By intentionally attending to the interactions that comprise relationships, opportunities for building trust, collaborations, reciprocity, and perhaps resilience and healing become tangible embodied experiences and potentiality for systems change (Andrews et al., 2019; Hebert-Beirne et al., 2018; Jordan, 2009; M. Walker & Rosen, 2004). Hebert-Beirne et al. (2018) found that successful CBPR occurs through trusting and productive relationships between community members and researchers. Their praxis of Transformative Community Spaces through Pláticas de Salud, Oral History Listening Events, and Data Analysis Think Tanks served as collaborative learning communities. Relational process outcomes included trust-building, co-learning, and knowledge generation (Hebert-Beirne et al., 2018). Andrews et al. (2019) advocated for research and evaluation to use a complementary CBPR and a trauma-informed approach (TIA) to prioritize community and participant safety, trust, and relationship building (Andrews et al., 2019). The co-creation of study design and materials can increase participant safety by reducing re-traumatization risk (Andrews et al., 2019; Syeda et al., 2021). Feminist-led action and theory in the movements against gender-based violence and applied research about GBV embody overlapping features of the TIA and CBPR principles, such as humility, voice, agency, empowerment, relationship building, collaboration, and solidarity and care.

b. **Trauma-informed approach theory and practice: Evidence-based and practice-informed literature**

Conceptually, TIA characterizes a powerful praxis for interacting in caring, cooperative, and humanistic ways with one another in our daily activities that restore human connection and dignity, reduce re-traumatization, and prevent traumatization. Many collaboratives engaged in a TIA discuss opportunities for healing trauma (Machtinger et al., 2015; Warshaw et al.,

2018). TIA theory describes an approach that recognizes the pervasiveness and impact of trauma and toxic stress on social-ecological systems, including complex, dynamic interactions across the individual, interpersonal, institutional, and societal levels (Substance Abuse and Mental Health Services Administration, 2014b). As the research and knowledge about trauma expands, varied definitions reflect realist or context-specific needs, discussed later in this article. The Substance Abuse and Mental Health Services Administration (SAMHSA), the National Child Traumatic Stress Network (NCTSN), and the National Center on Domestic Violence, Trauma, and Mental Health (NCDVTMH) are leaders in the TIA theoretical and practice movement. They produce much of the best practice literature on trauma, traumatic stress, and TIA. The literature includes grey literature, research, reports, curriculum, and training materials. Their contributions lay the foundation for learning, reflection, implementation, evaluation, and improvement activities among social and health service organizations and collaborators. Substance Abuse and Mental Health Services Administration (2014) posits that the TI system, institution, organization, program, and activities,

(1) realize the prevalence of trauma and its importance of taking universal precautions position; (2) recognize how trauma affects all individuals involved within the program, organization, and system, including its workplace; (3) respond by putting this knowledge into practice; (4) resist re-traumatization" (Substance Abuse and Mental Health Services Administration, 2014, p. 9).

During the 2019 Trauma-Informed Summit, Chicago community members contributed a fifth TIA.

The principle "restores and builds resilience by supporting healing for all" (Hernandez et al., 2019, p. 6)

The National Center on Domestic Violence, Trauma, and Mental Health intersectional feminist approach (see Chapter II) to creating TI domestic violence (DV) services and organizations prioritizes culturally responsive and accessible actions. It draws from the expanding body of interdisciplinary research (i.e., lived experience research with survivors and advocates, neurobiology, child development) and understandings of social and political movements (Warshaw et al., 2018).

Emerging service models call for a reimagined IPV service delivery rooted in the philosophical values of intersectional feminism, a movement that strives to address the

unique experiences of diverse populations more broadly, and trauma-informed care (TIC). These approaches can narrow gaps between current and mainstream IPV services and diverse survivors and communities (Kulkarni, 2019, p. 55).

The following evidence-based trauma-informed principles (TIP) are the foundation of TIA pedagogy and implementing a TIA to systems, organizations, practices, and interactions: (1) understanding of trauma and its impact; (2) safety and security; (3) trustworthiness and transparency; (4) cultural humility and responsiveness; (5) collaboration, peer support, and mutuality, (6) caring; (7) empowerment, voice, and choice; (8) cultural, historical, community context, including racial, ethnic, gender and sexuality, and class injustices, and (9) resilience, recovery, and healing (Substance Abuse and Mental Health Services Administration, 2014; Warshaw et al., 2018).

Many local and national governments established TI priorities. For example, an objective in the Healthy Chicago 2.0: Partnering to Improve Health Equity (2016-2020), the Chicago Department of Public Health (CDPH) is for Chicago's adaptation to a TI city (Dirksen, 2016). The Chicago Department of Public Health Healthy Chicago 2025 (2020) identifies the following guidelines for the City's work: Trauma-informed, equity-focused, asset-based, antiracist, capacity-building, and community-led processes (p. 57). The American Rescue Plan Fund allocated funding for trauma-informed care (TIC) (Whitehouse.gov, 2021). The California Department of Health Care Services (DHCS), in partnership with the California Office of the Surgeon General, calls for TIA toward its goal of reducing adverse childhood experiences (ACEs) and toxic stress by half in one generation (Bhushan D. et al., 2020).

The growing implementation and evaluation of a TIA in the behavioral and primary care settings and the social service sector provide operationalized insights for TI research. Some evidence is that adopting a TIA and TIC leads to positive outcomes. Trauma-informed care refers to strengths-based service delivery, such as an intervention and organizational approach that pursues how trauma may impact "an individual's life and responses to behavioral health services from prevention through treatment" (Substance Abuse and Mental Health Services Administration, 2014, p. 11). Trauma-

informed care focuses on the "physical, psychological, and emotional safety for survivors and providers, which creates opportunities for survivors to rebuild a sense of control and empowerment" (Hopper et al., 2010, p. 82). A survey from patients of mental health care organizations in Sidney, Australia, linked a TIA to positive interpersonal interactions (i.e., engaged in decision-making; respect, trust, non-judgmental, caring, empathy, connection; listened to, validated, felt heard, not just a diagnosis), physical environment (i.e., clean, comfortable; interactions with other patients and peer workers), and services (i.e., support, self-discovery, own pace; access when needed; involved family; different therapy options; individualized therapeutic relationship) (New South Wales Agency for Clinical Innovation, 2019, p. 12).

Given the resounding impact that individual and collective trauma can place on the safety, health, and well-being of individuals, relationships, and communities and the national recommendation and local mandates for TI systems, this study is interested in developing guidelines for TI interactions within a research context.

c. **Trauma-informed research praxis and evidence-based research gap**

While there was a substantive and growing presence of literature detailing participatory action research (PAR) models, such as CBPR and CER, in the fields of community health promotion and prevention, education, community psychology, and family medicine research, there is a lack of a gold standard to guide the conduct of TI-public health research (Jefferson et al., 2021). Jefferson et al. (2021) presented a scoping review of recommendations for conducting research with trauma-exposed communities since the Belmont Report (1978). Their analysis generated the following themes: (1) community benefit (focus on social change and primarily use CBPR); (2) participant benefit; (3) safety; (4) researcher well-being; and the (5) nature and scope of trauma research. Each category identified practices, cutting across the research design, recruitment, informed consent, data collection, results, and dissemination. They excluded studies that did not intentionally include trauma-exposed

communities. The lack of explicit use of TI research presents a methodological gap and a gap in evidence-based research for scholars to fill this methodological praxis gap.

There was also a gap in the literature on how co-researchers responded to study participants' and collaborators' distress and emotions and how this may impact the study goals and research processes, such as the types and quality of data elicited, partnership capacity building, recruitment, enrollment, completion, and retention. How do daily interactions among co-researchers (i.e., members of the research team), study participants, and collaborators (e.g., community-strengthening organizations [CSOs], practitioners, clinics, schools, public institutions, funders) reduce the potential of retraumatization and varying levels of distress (e.g., mild, medium, or high-levels)? What is the application of TIPs in a research context? How does TIP impact the research process? The research Coordinator (RC), Research Assistant (RA), and the interviewers' lived experiences and perceptions about daily research interactions may offer perspectives on these questions.

3. **Background**

a. **The study's purpose**

This exploratory study triangulated insights from co-researchers, best practice (grey) literature, and archival field note data to inform the development of evidence-informed guidelines for TI- interactions among co-researchers, participants, and collaborators in a research context. I drew on the utility of the Anti-Oppressive Praxis for CHET- Research, branch three.

b. **Anti-oppressive praxis: Community health equity for trauma research branch three**

This framework is a research organizing framework that identified the following relational processes to support positive embodiment during research processes: TI interactions; knowledge co-creation; co-learning; reciprocity between researchers, study participants, and collaborators; engaging participants as 'co-researchers,'; developing a dissemination mix of the research

outputs; and participatory health promotion and prevention planning post-data-write up (see Chapter IV, Aim 1). These PAR processes aim to restore and foster safety, trust, openness, and deep knowledge generation with the study goals of gathering credible and trustworthy data; improving the study recruitment, enrollment, and retention sample sizes; reflecting ethics of the community standards; and contributes toward dissemination and translation of research. Potential outcomes beyond the short-term study goals include expanding shared academic-community research spaces where safety, power-sharing, cultural humility, and collaborative interactions are valued and practiced. It is theorized and demonstrated by CBPR and a TIA that by growing these positive lived experiences, that trust can ensue. There is limited peer-reviewed research contributing to what constitutes TIA to research. Although the CHET-Research framework calls for TI interactions, peer-reviewed literature does not identify what constitutes such practices.

4. **Method**

My study aimed to follow the CHET-Research framework, branch three principles of engaging co-researchers in PAR to explore TI-interactions in the research context using adapted focus group methodology, called "Co-researcher Debriefs" (CRDs). I used TIA grey literature and my archival field notes as an RC for my analysis. Triangulation is a method used to enhance credibility or confidence in the truthfulness of the research findings (Lincoln and Guba, 1985).

a. **Co-researcher participants**

Co-researchers are key informants to the research process and make up the participants in this study. I used snowball sampling by sending email announcements to university listservs to promote the CRD opportunity. The recruitment and screening approach identified people meeting the eligibility criteria, including English-speaking adults (18+) working on funded qualitative or MMR studies in RC, RA, qualitative interviewer, or community engagement (CE) representative roles and participated in any of the following responsibilities: CBPR, CER, recruitment, or qualitative interviewing.

The people who hold these roles are experts in the realities of the daily research interactions with study participants, collaborators, and members of their research team. In this study, collaborators or research partners included community-strengthening organizations (CSOs) and their experts, public institutions or representatives, or study participants or people with similar lived experiences as the communities of interest pursued in the research in consulting or advisory roles. Experiential data from the co-researcher experts may offer new insights into the (1) relevance of trauma approaches in the research context, (2) types of experiences, perspectives, and questions that arise from study participants that are outside the research study's aims and questions, (3) types of emotional responses, memories, or priorities expressed by the participants or collaborators during various research-related interactions, (4) how co-researchers experience and reflect on these phenomena, and (5) how trauma, distress, or TI-interactions may impact research goals. The experiential and reflective data might reveal the co-researchers' implicit and explicit responses to various levels of distress and their perceptions of how these interactions shape the data collection experience.

I did not recruit researchers or study projects that home in on a particular community (e.g., survivors of GBV) or research topic (e.g., abuse). I challenge the normative thinking that the research team identifies what exposures constitute traumatic or result in trauma symptoms (a static, not constant phenomenon) and which communities are victims and survivors of trauma. The study wants to understand the relevance of and what constitutes TI research, in general, and gain preliminary insights across co-researchers' everyday interactions in interfacing with their research practices.

b. **Best practice, grey literature**

The grey literature described the conceptualization of TIA and TIPs, which I presented in the introduction, part b. It is evidence-based and evidence-informed. This literature includes materials such as reports, curriculum, and training materials.

c. **Archival field note data**

The archival data comprise field notes and reflexivity from my lived experiences as a community health researcher over the past fifteen years and as a participant-observer in TI activities, including training with NCDVTMH. My responsibilities in National Institutes of Health (NIH) and Health Research Services Administration (HRSA)-funded research projects entailed all aspects of the research process in various roles, including RC, recruitment, and retention interactions, interviewer, CE representative, analyst, author, and project manager. In my academic career, I engaged in the spaces of interpersonal violence and CPP research and social-ecological intervention and prevention approaches. My epistemological stance as a critical, intersectional feminist and ontological PAR research approach influenced my methodological triangulation method. As a community health researcher, I routinely produce reflexive and analytical field notes to reflect on the work and implicit challenges.

d. **Research ethics**

The study (Protocol # 2021-1343) was reviewed by the University of Illinois Chicago (UIC) Institutional Review Board (IRB) and determined exempt.

e. **Procedures**

To protect the co-researchers' confidentiality and privacy, I assigned a unique identification (ID) number at the screening, and they used pseudonyms during the CRDs. In December 2021, I conducted two virtual CRDs lasting 90 minutes on the university Zoom platform, following a semi-structured guide organized by the following three domains: (a) the relevance of TI guidelines within a research context (e.g., data quality, necessity); (b) experiences, knowledge, and perspectives of what is trauma? What does it mean to bring trauma awareness to a research context, focusing on interactions? (c) experiences and perspectives for recognizing and responding to various levels of distress or discomfort (mild, medium, high). I took handwritten field notes during the CRD, then audio-

recorded the debriefs, integrating my handwritten field notes of the CRDs. The Zoom platform audio-recorded and transcribed the CRDs and the debriefs.

f. **Analysis and interpretation**

I listened to the CRD audio recordings while cleaning the transcripts to include verbatim and pseudonyms. Then I uploaded the cleaned transcripts to Atlas-Ti, a qualitative data analysis (QDA) software. My initial steps included reading the transcripts several times, composing inductive codes, memoing, applying axial codes, and drafting preliminary themes. The use of inductive codes, memoing, and axial codes are standard techniques (Bryant, 2014), supporting my analysis of data that lend themselves to grounded theory insights (e.g., in the results section, see “mistrust” and “taking”). The data triangulation strategy used grey literature and archival field notes to inform my analysis. I focused on the research question: *what are evidence-informed recommendations for TI interactions among co-researchers, participants, and collaborators in a research context?* Then, I created deductive codes corresponding to the TIPs. Next, I coded the grey literature and archival field notes using the TIP deductive codes and codes produced during the CRD analysis. I revisited the CRD-coded segments, memos, and preliminary themes to decide whether to apply the deductive TIP codes. I refined the themes. I compared the CRD axial codes, memos, and emergent themes to assess concordance, complementarity, and discordance. Because the CRDs were abundant with reflective dialogue and lived experiences, I used phenomenological analytical techniques to describe the co-researchers’ experiences and meanings. For example, in the results, I presented a detailed vignette. The experience, as shared by the co-researcher, was contextually rich. I supplement it with a thick description, a phenomenological technique to capture the essence of the experience. Phenomenological techniques are described in depth in Aim Two.

g. **Assessing data trustworthiness**

Table XXIX defines the strategies I used to ensure trustworthiness.

TABLE XXIX
STRATEGIES TO ENSURE TRUSTWORTHINESS IN QUALITATIVE RESEARCH

Criterion	Strategy	Definition of strategy	CRDs	Literature	Archival
Credibility	Data triangulation	Multiple data sources across time, space, and person. Co-researchers varied by position, education level, and research topic. Literature included grey and peer-review. Archival data included webinar notes, RC field notes, and TI activities field notes.	✓	✓	✓
	Method triangulation	Multiple methods of data collection, thematic analysis of CRD data, lit review, field notes	✓	✓	✓
	Prolonged engagement	Frequent engagement in TIA settings, activities, and literature to become familiar with the setting and the context		✓	✓
	Persistent observation	Identifying features of integrating trauma awareness in research interactions and practices			✓
	Member check	Did not member check			
Transferability	Thick description	Describing the context, behavior, and experiences expressed during the co-researchers' CRDs to extract meaning	✓	n/a	n/a
Dependability and confirmability	Audit trail	Reporting and records of the research steps carried out	✓	✓	✓
Reflexivity	Journal and memos	Exploring my epistemology, ontology, assumptions, and how this influences my research decisions	✓	✓	✓

I adapted this table (Korstjens and Moser, 2018, p. 121), who based it on Lincoln and Guba (1985) and Sim and Sharp (1998).

5. Results

a. Co-researcher characteristics

Thirteen out of nineteen prospective co-researchers enrolled to participate in a CRD. The six prospective people that did not enroll faced scheduling conflicts. In the narrative description below, I call attention to the varying roles, responsibilities, research topics, and locations of the co-researchers because they are relevant to the research question. Contrasting with existing literature on TI research or safety in relation to ethics, the research question is interested in their everyday interactions across different research topics and methods (see Table XXX).

TABLE XXX
RESEARCH COMMUNITIES OR RESEARCH TOPICS THAT THE CO-RESEARCHERS WORKED WITH
OR ON IN 2021, 2020, OR 2019

"Black women with breast cancer"
Gun violence prevention
Children and adolescents
"Communities of color, people living with disabilities who are immigrants and refugees, including migrant farmworkers"
"Mixed sample of different types of people with diabetes"
Older adults
Older adult women
"People that struggle with access to health care"
Providers were serving communities and refugees with disabilities, including "Asian- refugees or Asian-based immigrants."
Women and girls across the lifespan about their bladder health and incontinence across three states
Sex workers
Trans communities
"Neonates to older people to teenagers to transient people"
Education literacy intervention and evaluation.

Co-researchers varied by position, education level, research topic, and geographical location. Several have experience in data analysis and write-up, which offers the study insight into whether distress or how emotions and the co-researchers' response is integrated or avoided at an analytical and dissemination output level. All the co-researchers indicated working with study participants, collaborators, and team members who experienced traumatic events identified in standard literature (i.e., interpersonal violence, racism, loss of a loved one, poverty, homelessness, incarceration, an overdose of a loved one, substance use disorders, chronic physical or mental illness, natural disaster, car accident, acute injury/harm, war, refugee). Nine co-researchers participated in the first CRD, and four co-researchers participated in the second CRD.

The co-research participants conducted the studies in varying geographical locations (i.e., urban, rural, and suburbs), cities (i.e., large, medium, and small), and countries (U.S. and Canada). Ten served as RCs, clinical research coordinators (CRC), or research directors. Three co-researchers were principal investigators on their own qualitative or MMR dissertations and currently serve as RC or research directors and qualitative interviewers. Three served in RA roles. Twelve were conducted qualitatively, and nine pursued mixed methods research nine. Eight advanced CER and four engaged in CBPR.

All co-researchers participated in recruitment, screening and enrollment, informed consent, and collaboration with research teams. Seven conducted clinical research. Eleven collected survey data analyzed qualitative or quantitative data and collaborated with CBOs, faith organizations, non-profits, and public institutions (e.g., public health departments, community health clinics, schools, prisons, etc.). Seven collaborated with additional representatives from community settings (e.g., libraries, park districts, YMCAs, and local businesses). Four collaborated with elected officials or their staff. Ten engaged in member-checking and nine in the write-up. Experiences in writing-up results varied, with sole or primary authorship (doctoral candidates/recent doctoral graduates) to contributions ranging from writing abstracts, methods section, preliminary findings, conference presentations, summaries of

community engagement conversations, and study material development (e.g., protocol, recruitment materials, informed consent forms). During the CRDs, the co-researchers drew on their research experiences and reflections with their engagement in communities with diverse and intersectional experiences.

b. **Emergent themes**

Thematic analysis and interpretation of the CRD data uncovered six themes. I portray the themes below, contributing exemplary quotes to each theme to capture the expertise and tone of the co-researchers and the intricacies of their dialogue. Emphasized text is italicized. Co-researchers are not identified when one quote is offered. However, the co-researchers are identified below by a unique identifier when I share their discourse.

i. **Theme 1. The nature of oppressive, traditional research practices: “I am managing a level of oppression” and a victim of an oppressive system**

The theme that emerged is the nature of oppressive research practices is associated with traditional research processes and trauma and distress among study participants and research team members. One co-researcher has been an RC and research manager for over two decades and discussed her perception of her role as a “manager of oppression” with the other co-researchers. The quotes below present some of their discourse.

“If you’re working in these [research] environments...I worked in for over two decades...I call it— ‘I am managing a level of oppression.’ Right? So, I’m trying to recruit patients or participants or subjects...into a study...and now I am in this juggling act because now *I am a manager of oppression*, right? Oppressive things that was already there prior to us coming in... and *we’re another source to manage or do the juggling act of oppression*. If not, makes sense to anybody. You know?” (Participant 2). [Co-researchers nod their heads] (Participant 9)”.

Co-Researchers: “Yes.”

“I echo that 100%. Um...One of the projects I was on, I managed a team that would encounter this a lot...so, then, I wasn’t necessary with the participant, but they could

come to my office—what do I do about this? Or they would come to a case meeting and be like, what do I do about this? I am working with a ... (Participant 9)".

Other co-researchers agreed with her description.

"It can be difficult to know exactly what to do, or how to handle that. Like, she said, about managing oppression. This is a big problem and I feel kinda' powerless to do something about it (Participant 9)".

"I hear you're managing oppression, that has to feel horrible to manage oppression, right? To have this sense that you're here managing oppression. It's not a good feeling. So then, having someone to help you, to provide the support for you—as the researcher, as the research coordinator, I think is also as important because trauma isn't just falling on the side of the participants, sometimes it falls on us as participating in this process, too (Participant 3)".

"So it's traumatizing for me, because I'm unable to help them, traumatizing for them, because they feel they're coming to you with an answer. I absolutely agree there. We know we are getting into this territory. We know we are approaching these subjects. Why aren't we better prepared?... "And I believe that they [study leadership] downplay it, because it will be even harder to get people to do this job because it's underpaid, and the demands are crazy (Participant 8)".

The quotes above-demonstrated agreement among the co-researchers that they knowingly become complicit in managing a level of oppression and experience trauma and distress in doing so. Their discourse produced a new insight that researchers experience trauma during their work carrying out their research project's responsibilities. "Managing oppression" included being a research manager or coordinator and negotiating the different researcher roles and juggling how to respond to the participants' unmet needs (e.g., "housing" or "isolation") or requests ("like sharing interviewing data" or "helping me keep my lease at my apartment while I'm being kicked out"). It involved acquiescing to the everyday inner workings of the broader systems of oppression—the complex structures comprised of institutions with power and resources, policies, and power dynamics, amidst the daily interactions. The sub-themes below revealed the research policies, power dynamics, practices, and interactions that contribute to "managing oppression" and a victim of an oppressive system.

(1) **1.1 History of unethical and traumatic research experienced by communities of color, trans people, and other communities and the relationship with hiring practices by the study leadership**

Sub-theme 1.1 emerged from a naturally occurring in-depth analysis by co-researchers who share overlapping features of lived experiences of the communities their research projects sought to engage. They contemplated the relevance of a TIA and the concept of trauma in a research context. The inherent “power imbalances” between the participants and the co-researchers are distressing. “Just the act of being researched can be, you know, a trauma trigger for a lot of, for a lot of people and a lot of populations as well. Um, you know, there’s an *inherent power imbalance there and academia has a long history of playing its own role and oppression.*” The title of 1.1 captured their language and the essence of the phenomenon of hiring a research team that represented similar lived experiences of the community of research interest across two domains.

The first domain named was the lack of representation among communities of color in research as partially being mediated by the “pipeline” of who may choose “to go into research” from mistrust of research.

“... I don't see that a lot of times in research [representation]... it is an important thing that we want to make sure we capture. *I don't know if it's a historically a pipeline thing and who goes into research and who chooses, or what have you, but I know especially in communities of color there has been a lot of mistrust between research and the community* and this idea that people feel like researchers are coming in to take and not give to communities.”

The mistrust—a level of exclusion perpetuated by “taking” ensued over decades and continues to the present excludes peoples’ decision to participate in research production. She encouraged study leadership to implement “intentionality” in hiring research teams representing the community and translating the research into action.

*“And so, I think the more that we can *kind of change the narrative by really having some level of intentionality about who goes out and what we're looking to gain* from this and really coming back and closing the loop on the research so it's not we're just coming in and getting all of your information but what are we doing with it. And how does—how does it translate into action?”.*

The second domain linked automatic assumptions about hired research team members who shared some characteristic(s) as the community of interest. Automatic assumptions occur when the research project only hires one person assumed to represent “the community” surfaced across the CRDs. “Being the one Black woman, “a person of color (POC),” or “trans person on a team.” The co-researchers described a common phenomenon where they experienced “dismissing” of their input and lived experience while being referred to as “the expert” of “the community” all at once. A co-researcher described this dichotomy as problematic because she experienced disavowal of her insider knowledge and, at the same time, was looped into discussions where she was assumed to give voice to an entire community.

*“I have been...in the...research assistant or research coordinator role and happen to be, you know, a person of color. There's this *automatic assumption* that, like, and working with the communities that I, and having family members who live in the communities, like, I'm really connected to the communities that I work in, and then I researched. Unfortunately, that is what's happening there, be researched with one...*Not to make assumptions about folks because they're from the community.* That doesn't mean they have, like, this universal insight into every single individual in the community either, so not erring on either side—*not dismissing*, but then not putting, like, too much on someone when you're thinking, ‘oh, you, you are the voice of an entire community.’ *Like, no, no one individual can be the voice of an entire community* (Participant 3)”.*

“... I think what she was saying, I think, like, that pressure to be like, though, the one person to know everything about your community and to just knowing, how, like, that in and of itself is oppressive (Participant 1)”.

The co-researchers described the nature of “mistrust,” featuring the interrelated dimensions of “taking,” “exclusion,” “dismissing,” “automatic assumptions,” and “not listening.”

The dimension “taking” consists of four areas. Taking involved (1) knowledge and expertise from communities (i.e., members of the research team that represent the communities, study participants, and other people who represent some aspects of the communities’ lived experiences) during the

research process, (2) without integrating their input in decision-making processes, (3) without adequate compensation (i.e., salary and incentive), and (4) without a plan for translatable action in their communities. Table XXXI below provides quotes describing the four areas of “taking,” a dimension of mistrust.

TABLE XXXI.
DESCRIPTOR QUOTES EXPRESSING THE FOUR AREAS OF “TAKING” –
A DIMENSION OF MISTRUST

Areas	Descriptor Quotes
1	<ul style="list-style-type: none"> “...people feel like researchers are coming in to <i>take</i>....” “...there’s been a lot of studies about trans folks, <i>a lot of those studies just kind of sit on a shelf somewhere</i>, because, you know, researchers love to write their final thesis on, you know, on trans folks. We’re an exotic topic, I guess.”
2	<ul style="list-style-type: none"> “...some of the problematic things that I see are really sidelined, and so it’s like, <i>I don’t have a say in how studies are carried out, even though I have this insight</i>, especially if you’re thinking about folks who have been researched to death.”
3	<ul style="list-style-type: none"> “We always think about <i>time</i>, one of the huge stressors I have when we are offering an <i>incentive</i> or monetary payout...I’ve been hearing it for years, and it’s infuriating because <i>you want this data, you want this information from people</i>, and I’m not saying you have to pay people for everything. But don’t minimize it. <i>Look at your implicit biases and what you think they may do with the funding, right?</i> So I’m always getting it, and it’s very, very stressful.”
4	<ul style="list-style-type: none"> “...but what are we doing with it? And how does—how does it translate into action?” “And they [studies] don’t help trans people.”

Subversive, passive interactions of not listening, inaction, and avoidance operationalize the domains of “taking.” A common form of trauma that showed up in the research process is not listening. “If we’re gonna talk about, like, trauma, *being ignored and not listened to*, and, you know, *dismissed when you’re talking about, you know, your experiences*, is a form of trauma.” Inaction and avoidance often presented themselves in the discourse as a “lack of empathy,” and a mismatch between the study

protocols and the community's lived experiences, expectations, and needs. Again, hiring, and decision-making practices across the research team are implicated in the discussion.

"This participant is telling me that, you know, they're experiencing housing instability, or they're experiencing health challenges..., is this the most important thing for us to be focused on right now? For this participant? For this group of participants? Yeah, so those are some of the struggles of knowing what the needs are going in but having other folks who are less aware of the needs be the ones who are in charge of designing the studies, that then I have to carry out (Participant 3)".

"The lack of empathy towards the topics that we're covering. Let's be honest, our PIs...are not people that are even remotely familiar with the issues that are communities are facing [co-researchers nodding in agreement] ... But, if this is not your mastery, please bring someone in that is. And like 1 mentioned, bring in a community advocate that lives that every day, so that we can better understand, and grow, and learn. And not just because we're coordinators and they're PIs, our input is not important, or as important (Participant 8)".

"...shouldn't these things be baked into the entire research protocol? [co-researchers nod in agreement]. Why are we asking some of the research questions that we, that starts up way above, like, where we might come in...I think, some responsibility, like, upstream, when we're making these questions, like where do the questions come from? If really these things aren't something that we're asking is not beneficial to the community members...(Participant 12)".

The subtext of the above quotes is power dynamics and whose interests are prioritized. Power dynamics occur between the academic research team and the community or study participants and between the PI's and RCs. The research interests reflected the PIs and funder priorities. At the same time, the quotes below offered an indication that communities may resist study participation.

"And I don't know if you all are having this experience, but certainly for us, like participants are less willing to participate... Some of our studies are like 15 yearlong cohorts of longitudinal studies and participants are much less willing to take part in research that does not honor their humanity, that does not benefit them and that does not, like, take into account, their wellness (Participant 1)".

"Yeah, because you really don't have a saying [about the communities' interests and how it may impact recruitment], you get your protocol and you're like, 'wait a second. I don't like anything about this (Participant 1)".

"The whole culture of research, in general... in our consent form, in the benefits section, it's like there is no direct benefit to you, but please still do this study, and as me, as the coordinator, the PI is still going to be like, 'wow, you know the NIH is on me about recruitment, you need to, you, we need to get our number's up'. It's like, well, like,

why? Who cares? [laughs]. Like, I don't know, I could on about that, but [laughs], I hear that for sure. It's a great example (Participant 9)".

The lack of a plan for responding to requests for support for unmet health and social needs when interacting with communities with low access to resources indicates inaction and avoidance. Building on the evidence presented thus far, study participants and the co-researchers experienced distress and uncertainty during these cumulative experiences.

"I am working with a participant who is at odds with her landlord and want to stay, but he's kicking her out and, and they just keep, you know, pressing me to do something about it...*It can be really difficult to know exactly what to do, or how to handle that*(Participant 9)".

"...there's this understandable, but challenging dynamic when you're interviewing people because they're oppressed people and marginalized and have unmet needs. And you're there to talk to them about those unmet needs, *but you're not able to provide—you're not a service provider for those unmet needs* (Participant 1)".

"I do a lot of clinical-based research that incorporates behavioral and community health... *the first question always is, where can I seek medical care after this intervention? A lot of the communities are people that struggle with access to health care. So, I feel that because they 'see you in this type of venue and that you can help with that'* (Participant 8)".

I present a vignette below shared by a seasoned research manager and qualitative interviewer that revealed a deeply serious, troublesome, unethical, and unchecked experience about the present-day reality of trauma and retraumatization that can occur in research, not only drawing attention to the need for TIA in research but also the accountability of the study leadership and institutions. Despite the study's conflicting data collection protocol and the disapproval of the principal investigator (PI), she tapped into her status with "insider knowledge." She exercised her cultural responsiveness and humility in response to a participant who received a terminal breast cancer diagnosis just minutes before her interview.

"So, um, I worked in breast cancer in native Black American descendants of slaves, Negro women, right? So, there are one-on-ones and in a lot of different situations, via telephone, me in an interview, being face-to-face, being there with the PI, working with women who have metastatic breast cancer. Right? Them coming in. Us interviewing, us

talking to them. A participant was screened for a second part of the study 8 days prior to her appointment. During the screening, she expressed her delight to help other women. She was re-consented, the interview begins, and about 20 minutes into her qualitative interview she mentioned her breast cancer came back [co-researchers nodding, shaking their heads, empathy via non-verbal's the by the group]. Right? She was informed the day of our appointment. She was in shock. Now, she's ineligible! *The trauma begins with me.* I stopped the interview and spoke with the PI. I had to encourage the PI to come into the room to tell her she was now ineligible. She understood but was disappointed. *In research, being able to understand where you are in their place. And being able to kind of, um, like decompartmentalize what's going on with that person. And being in the culture and a population that we're in.* The first thing that comes to mind is prayer. And, you know, because we, because one thing about us working in research, *we have to build rapport because we want people to feel engaged, we want people to be engaged when people to understand that we do have a level of empathy and that we are there, there to be supportive and be very helpful.* Right? So, one of the huge things was being in, and the PI is there, and then I'm interviewing someone to introduce themselves and she tells me her cancer came back, which you still want to be participatory in research, but she wants to pray. [co-researchers nodding]. So I PRAYED. Because that's what we do. [co-researchers nodding]. We just, we just prayed. *It was needed to decrease the anxiety. And the PI was like 'well you don't do that, but what was I supposed to do in that instance? Right? The PI didn't want to give her the incentive.* At least, for coming in and starting the interview. Eventually, it was agreed and an incentive was given....That was, that was not like one time, but on several occasions, something like that, has come up. *So, that's trauma. I was traumatized. She was traumatized.* And the PI had lack of empathy, lik, okay, you can't do that. But I didn't know what to at the time"

The co-researcher expressed a tone of desperation. The other co-researchers nodded their heads, empathizing. The co-researcher continued,

"Yeah, talk about my trauma, I was even to the point, I say, you know what, I can't do this. I'm not gonna be able to do this anymore, because we get medical records, we scan – to go looking for information that then we get them from the patient, you know, all that time knowing what was going on in that population that I work with."

The co-researcher explained that qualitative data goes missing from the data set because if someone gets distressed, the researcher often offers to turn off the audio recorder for respect, but also in case their PI gets upset if they address the participants' distress.

"Yes, you turn off the tape and you engage with them, you talk to them, you look for other resources—'hey you want to relax? You wanna calm down? You want to call somebody? Wanna, you know, what do you want to do in order to, kind of, you know, relax with this and then ever gotten asked the question, do you think I'm going to dies? You know, I'm doing this, I'm doing everything I am supposed to do, from a doctor

standpoint [the patient describes]. ‘Do you think I am going to die?’ *And you know, talking about stressor, being trauma-informed... that’s like, okay, how can I engage with her? How can I try to communicate with her? What’s going on? Of course, I was like, ease off the woman. I’m gonna get the PI, he was a clinical psychologist who can come in a give some of the insight or offer some sort of therapy or another doctor, but yeah, it didn’t work out that well for me.*”

The exemplar dialogue attributed not listening, inaction, and avoidance to the priority of production of research over time, tied to funder priorities and timelines, and PI expertise and interests, that often lie outside of the local communities. The passive domains became observable at the co-researcher level when asked about their everyday interactions and reflections with stakeholders: participants, members of the research team, and collaborators, and contributed to the dimension of “taking” and broader understanding of how mistrust ensued in academic and community research. The co-researchers shed light on the traumatizing landscape of their positions, including the dismissing behavior of study leadership, which, whether intentional or not, suppressed their everyday needs and resources and undermined their capacities to interact with their positions ethically with cultural sensitivity and responsiveness, responsibly, and hampered their ability to achieve study goals.

(2) **1.2 Funding and budgets**

Sub-theme 1.2 emerged when discussing the structural forces perpetuating the oppressive system of traditional research.

“... if it’s a funded project, we’re essentially making money off of, you know, off of people’s marginalization...has to be a lot of thought put into why you’re asking that question and whether or not, like, what you’re asking it actually benefits them...We’re just transactional in the health sciences and medicine if any of the research that my associates are conducting. So, you’re telling me that it is not relevant doesn’t make it true. But I also need to feed my kids, so I’m just not going to rock the boat and be the oppressor. Like it was worded, and it’s, it’s a really difficult place to be, like, I don’t want to be that person, but also, this is my job (Participant 1).

“I just want to concur. I feel part of the process of researching, we are just so focused on the aims and goals of our funders. *And a lot of things fall through the cracks. Not only the needs of the community but also the needs of me—as the advocate for the people.* (Participant 8).

ii. **Theme 2. “Strength-based” praxis: “Everyone experiences trauma” and “no matter the focus of the research, there may be a possibility that someone will bring up a traumatic experience”**

Theme 2’s title bridges two central findings. First, I attend to the first clause, “strength-based praxis: everyone experiences trauma” using an exemplar quote and my archival field notes as an analytical tool.

When we’re talking about trauma-informed making sure that our definition of, what like, trauma is, is not deficit-based, so it can’t be that you experienced trauma so that means you’re less than. So, finding a way to make sure we’re clear about that everyone experiences trauma. Everyone experiences oppression in some form or fashion, everyone does...So being very, very conscious that experiencing this trauma, does not make you anything less and ... starting the guidelines from there.

I opted to link these two findings because not only do they recognize that “everyone experiences trauma” and the possible trauma could arise in any research interaction with humans, despite the research focus, and because approaching TI-research without a strength-based praxis may lead to unintended consequences. In short, a deficit approach may perpetuate potential stigma, prejudice, and biases, which could continue the cycle of disproportionate adverse health outcomes. Given the evidence of toxic stress's deleterious health and social impacts, there is reason to promote a TIA. However, raising widespread awareness about trauma, and experiences that may contribute to trauma, even when taught within a social-ecological or ecosocial framework, may cause internalization of self-blame and shame. For instance, survivors of family violence learned ways to survive in their family dynamic. These adaptive responses are the essence of resilience and are robust and vital to their sense of self and security. At the same time, their survival depends on the inner workings of their family system. These adaptive responses may no longer serve their best interests (i.e., health and social interactions) when they are no longer in their family system. When repeated, they might cause ruptures in relationships, at work, and reaching their full potential and well-being. A deficit approach, although unintentional, can elicit feelings of “less than.” A second example, as journaled in my archival field notes

during a conversation with a colleague, is how can someone tell a mother of Black sons to calm down and take a breath when a police officer could shoot their children at any given moment? Their fear response is an authentic, physiological adaptive response to natural and perceived threats (perceived is based on the norm of structural violence and racism and lived experiences) and telling people and communities how to behave or to just self-regulate, which is what some interpretations of TIA imply, is a deficit-approach and must be challenged. Although we, as researchers, can offer support, our job is not to assess, correct, or send messages that anyone or their adaptive responses to their life experiences is less than others. As shared in the CRD, trauma-informed principles and TI interactions offer strength-based ways to respond to distressing emotions and promote safe spaces.

The second clause was captured in the discourse and underscores the fundamental concept of TIA, which, as quoted in the introduction, section b,

(1) realize[s] the prevalence of trauma and its importance of taking universal precautions position; (2) recognize how trauma affects all individuals involved within the program, organization, and system, including its workplace; (3) respond by putting this knowledge into practice; and (4) resist re-traumatization (Substance Abuse Mental Health Services Administration, 2014, p. 9).

Knowledge of oppressive systems, collective trauma, racial trauma, and the concept of intersectionality deepens the understanding of trauma and its impacts (see Chapter II for definitions and discussion). The critical point is, *“Even if I think that the topic has nothing to do with trauma or mental health. The fact that you’re interacting with a human being and asking them to share their life experiences. There’s no way of telling what might trigger someone’s memory to say, oh, and someone in this bad thing happened”*.

“ ... important for researchers to keep in mind is, you just have to be open to the possibility that no matter what the questions are, the focus of the research, is that there may be a possibility that someone will bring up a traumatic experience or traumatic topic. And just to be open to that. And have to, whatever degree is appropriate or needed to have some ideas of how to address it...if someone does share something, okay, these are things that I need to be aware of ... so the researchers isn’t caught off guard”.

Survey items, for example, can bring on participant distress and researchers are unsure of how to respond.

"...But we did add a trauma measure for this last wave, and we've just been kind of struggling to some extent about how to handle, when people do disclose...um, trauma? And honestly, even just, in—like, different mental health struggles that they're having because of the pandemic. We have been kind of unsure. I think that's something we've been thinking about, is, like, we developed a resource list at one point (Participant 5)".

"...The thing the comes up the most is, like, when you're doing, when you're administering, like, questionnaires, like, say, like a PHQHQ eight or nine, and you know suicidal ideation comes up, that's like, probably the biggest thing. And I think, on the one hand, you at least, up until this point, you know, so far, in my experience, it's been like—ok, we have a psychologist, like on the project and, and, or some sort of, like mental health care provider. And so, you, just, kind of, defer to them. But I wish that there was, additional training around that? (Participant 9)".

Distress can arise in qualitative research.

"I really think it [TIA] is incredibly important, especially with qualitative research, doing interviews or focus groups with, you know, because we're working with human beings, who unfortunately have experienced some bad things differently, maybe different degrees of bad, depending on context and perspective (Participant 4)".

Vicarious trauma occurred across a research team while conducting a content analysis.

"...it's on gun violence research, as part of it we read court documents...during the pilot, there was a lot of talk about, like, just how disturbing some things that we were ready was, and your kind of just coding and then moving on to the next. And so, we had, like, this informal, you know, chatting with each other, like 'holy—can I talk about this things that I just read? (Participant 12)".

iii. **Theme 3. The core feature of trauma-informed research is safety: "Do not inadvertently do harm," and researchers proactively foster safe spaces and learn how to respond to varying degrees of distress**

The third theme that emerged aligns with TIP 2 "safety". The discourse revealed that researchers valued consistent preparation to foster safe research spaces and how to respond to distress. Common language when referencing preparation of TI-interactions and practice was "intentionality" and "proactive." In addition to aligning with TIP 2, TIPs 1 understanding trauma, 3 "trustworthiness and transparency," 7 "voice" and 8 "resilience, healing, restoration" were implied.

“I think it is important for researchers to have a good foundation understanding of the effects of trauma and a basic understanding of how to respond with the best of intentions *so that they don't inadvertently cause harm*, as part of as part of their work (Participant 4)”.

“...trauma-informed is, you know, *create a space, let's say for folks to feel like they can share—what you don't want to do is cause more harm, right?* There is a fine line, and everyone is different, in what that looks like (Participant 13)”.

“There has to be a lot of thought put into *why you're asking that question and whether or not*, like, it, whether or not, what you're asking, *whether or not, it actually benefits them* (Participant 1)”.

The dialogue revealed several distressing situations for study participants and researchers alike. Study participant distress generally caused researcher uncertainty and worry. Of great concern was that the distressing experiences tend to go unrecognized in daily practice. Even if they recognize it, it appeared to be avoided or unaddressed by study leadership or omitted from the data.

“...it makes me feel, like, kind of, hopeless or very, like stunted, like, I don't know what to do. I feel, a little bit, like, I want to do something, but I almost feel paralyzed to do anything. Because I don't want to do the wrong thing, or because I don't want to harm them. Um, and so, at the same time, I also feel, kind of, feel like the people who are trained to take that on... I want to make sure they're not harming them. So that's, I think, the thing, like I think that's—that's like certain questionnaires, even, even, around say, I work actually mostly with diabetes, at least in the last, like, seven or eight years, actually, longer than that, and that's usually the number one thing that comes up the most is like diabetes management or like issues around, you know, kind of depression and, you know hopefulness around chronic illness (Participant 9)”.

“Participants earlier in the pandemic, was much more, your, kind of, offering to connect them with resources, but I think as things have gone on, we've kind of, like, struggled, 'what is our role in this?' Now that things are little bit more stabilized to some extent with resources during the pandemic. Kind of like, 'what is our role?' ... *a lot of the older adults I'll talk to will talk a lot about loneliness and different struggles, with, you know, not having as many social connections*. And that's something I personally struggle with. Knowing that, that's not, like, the time and place, but it's not my role to, you know, I have to be, like, neutral with them, but at the same time—it's yeah, it can be sad and difficult (Participant 5)”.

“In following to that of 9, is like *that guilt that you take*. Especially like you do, what 20-30 interviews in a week? And half of them are going to have some kind of emotional turmoil. Did I answer correctly? How's this patient doing? Should I follow-up? Like, what happened? Did I do the right thing? Like, did I mess it up? It's, it's a lot. It's a lot on our

shoulders and I don't think people realize that because they only look at your response from the research item and everything around that. *I'm not exactly sure what happens to the data, especially if it's a very sensitive interaction.* I will write a letter. I, I, I don't take those things lightly, *but I do feel ill prepared for it*, especially when it's a subject that I'm not expecting to take that turn (Participant 8)".

There was a profound consensus for TI research and training.

iv. **Theme 4. Planning trauma-informed foundational training with experts from the community that the research project seeks to engage and academia**

The fourth theme that emerged expanded on theme three that researchers should proactively foster safe spaces and learn how to respond to distress. The discourse generated four pedagogical domains. Each domain describes the foundational elements of planning a curriculum for research teams that brings TI awareness and aligns with TIPs. The first domain defines trauma, which involves planning TIA training with experts from the community that the research project seeks to engage and academia. The expert's knowledge may be lived experience of the community's collective trauma, their individual trauma, academic, practitioner-based, or a combination. Based on the exemplary quotes in Table XXXII, defining trauma recognizes the phenomenon's spatial, temporal, oppressive, and cultural nature. Table XXIII presents excerpts associated with domain 2, which includes discussions on the researchers' role in responding to distress in the TI research training. Table XXXIV identifies domain 3, which is expanded on in Theme 5.

v. **Theme 5. How to engage with trauma awareness? Embrace a learning and caring mindset with others and oneself**

The fifth theme that emerged was how to interact with trauma awareness, which expands on theme four, planning the TIA training. The following quote integrates the essence of how to engage in TI research, which leads from an anti-oppressive praxis:

TABLE XXXII.
PLANNING TRAUMA-INFORMED APPROACH FOUNDATIONAL TRAINING, DOMAIN 1

DOMAIN 1: Defining Trauma and Planning the TIA Training with Community and Academic Experts Recognize the Spatial, Temporal, Oppressive, Personal, and Cultural Nature of the Phenomenon	
Element	Exemplar Quotes
Strengths-based to counteract “deficit-based.” TIPs 1, 7, 9	When we’re talking about trauma-informed making sure that our definition of, what like, trauma is, is not deficit-based, so it can’t be that you experienced trauma so that means you’re less than. So, finding a way to make sure we’re clear about that everyone experiences trauma. Everyone experiences oppression in some form or fashion, everyone does...So being very, very conscious that experiencing this trauma, does not make you anything less and ... starting the guidelines from there.
Collective trauma and “many individuals from the community who are very well versed in a trauma-informed approach.” TIPs 1, 4, 8, 9	A lot of the discussion revolves around, kind of, an individual focus on trauma, like a participant experiencing stress. You know, I would say, just coming into a community that has collectively been exposed to trauma for a very long time. There are many individuals from the community who are very well versed in a trauma-informed approach, even if they don’t call it that [laughs], so kind of, defaulting to those experts because, you know—kind of a role switch—in that, in that instance, the trauma experts are your participants (Participant 6). “...Getting familiar with a history of place, or it may not be a place...Kind of like a timely topic—the anti-Asian sentiment. Um, you know, if you’re not Asian, it is not really; it may not be even something that comes up in conversation with people, that, you know, and you know, it may be just people kind of condemning it, but I think, there, is, some benefit of getting more informed than that, you know, like so not really trusting your own sense of the situation, if you are not walking in those shoes. Um... kind of taking it [your own sense of the situation] with a grain of salt, when, when you don’t have a sense that this is really happening” (Participant 6).
“Definition of trauma is in flux” and tied to historical and structural context. “what we know about trauma is still...developing.” TIPs 1, 8, 9	“...I just hear the term, like trauma-informed quite often, um, with not much context to that or like explanation. One thing that they did for coordinators in our lab, was have someone who works a lot, who has done a lot of research on trauma public health, mental health, and she came in, presented to us, and then kind of did like a Q & A and she just talked about, to, like how the definition of trauma is in flux, and the DSM IV and V...insurance for payment related to what it is, I think it that, that was really helpful to get the back story. Because, I think, so much of what we know about trauma is still, really, like, developing really hasn’t been a trends awareness for a long time...Instead of just, yes, me, kind of, everyone having their own, kind of, idea of what is trauma versus stress, know, whatever else?” (Participant 7).
Recognizing individual or collective trauma TIPs 1, 7, & 8	“...new researchers...that feel very trapped or very alone. Because they cannot relate this to other stuff, because they feel there’s no, no venue to express their concerns. They might not even know how to identify what it is that they’re experiencing, so guidelines from this is—what this is, this is how you know it’s been addressed, these are the trends in your community, in your region (Participant 8).
Defining one’s experience as traumatic is personal. TIPs 1, 7, 8, 9	“...everyone experiences trauma...whether they want to admit it or not, they do” (Participant 3). “... not necessarily because somebody has experienced a challenge or speaks to something that may be to you, you’ve had some experience that you would define as traumatic, it doesn’t necessarily mean that’s the same for them. I think, incorporating that kind of philosophy or lens is really helpful to and not like overstepping or assuming” (Participant 12).
“Include anti-oppressive principles.” TIPs 7 and 8	“...include anti-oppressive principles, because trauma doesn’t come from out of nowhere...talking to other researchers... research has an inherently oppressive history and here and now... it’s really important for researchers to have an opportunity to understand their potential role in that oppression and how that plays a part, and how they can be a source of trauma or trigger for trauma for those folks. Like, people weren’t born traumatized. Oppression brought them there, so you know, I think trauma-informed, kind of—only doing trauma-informed education, kind of, absolves the, like researchers from their role in being a potential source of trauma” (Participant 1). “... bringing in that anti-oppressive that one is talking about – like, the anti-oppressive framework, like, you have to bring that into this work because you have to understand, what are the systems that folks are navigating? How are you coming in as this researcher—yet another keeper of the keys to something, right? Coming in, researching one –folks who have been marginalized, like, what – what is that what does that do to someone to have once again be in this position, where like you are, you are seeing—even the very fact that we’re talking about folks as marginalized —like we’re SEEING THEM AS MARGINALIZED? ...knowing that you’re going into an interaction WHERE SOMEONE SEES YOU AS LESS THAN, IS like HIGHLY PROBLEMATIC” (Participant 3).

TABLE XXXIII
PLANNING TRAUMA-INFORMED APPROACH FOUNDATIONAL TRAINING, DOMAIN 2

DOMAIN 2: Discuss the Researcher's Role in Responding to Distress
"Reminder to let researchers know as a researcher, your job is not to be a therapist or become a counselor or to make the situation all better... <i>Your role is to be supportive and to model simple phrases to let the person know, 'I heard you, it's valid. You're not alone. Here are some resources to follow, or I will follow-up with you, to, support you later at a more appropriate time.'</i> Those types of messages, I think, in most cases, is going to be enough to let the person know that their emotions and their feelings were heard, seen, respected, and—and helps them know support is available."

TABLE XXXIV.
PLANNING TRAUMA-INFORMED APPROACH FOUNDATIONAL TRAINING, DOMAIN 3

DOMAIN 3: Engage the Research Team in TI- Interactions in a Research Context
See Theme Five.

I definitely bring someone in, who has the insight, who is part of the community, but then when you do bring that person in---I, think if we're having a trauma-informed approach, then we need to be very conscious on *how we're engaging folks...* 'What does that mean for you to engage folks in research knowing that there has been this history with research?' How do you move forward with humility? (Participant).

Her quote speaks to the CRD discourse and emphasizes the key recommendation for TI-research interactions. Ask, how are we engaging folks? Engaging in ongoing praxis is the key to learning how to proceed with TI interactions in the communities' context. TI- research practices proactively create "the space to let the experts in the room show up". "It's the openness to listen." Praxis involves listening, dialogue, and reflection of practice with conceptual thinking. It's ongoing hearing, learning, and application. "I think part of trauma-informed care... that *you are constantly open to learning new things and hearing people's experiences.*"

TI interactions prioritize listening and makes space for "*thinking more deeply about what you're hearing in the moment* and letting even if there's multiple participants kind of letting that *space organically produce a dialogue discussion about that trauma experience and kind of stepping back from, you know, the research agenda.*

The CRD data and archival field notes interpretative lens, describe critical reflexivity strategies in the TI-research praxis of intentionally developing the study design and data collection materials in collaboration with community partners and their research team. “Do not underestimate the power of the group.”

“And if you have humility, you have to be willing to say, ‘hey, my study design needs to change because it’s not doing the thing that needs to be done, or it’s being done in a way that is really like not helpful to the community’. TI-research intentionally designs community-responsive in developing research tools and materials to mitigate harm, benefit the community interest, and enhance data credibility. For example, the use of ‘accessible’ language and attending to the ‘cultural elements of language’ (Participant 9)”.

“I think that also helps in developing some of the research tools... And I think having folks who’ve had experience in mental health and immigration justice and communities of color and disability. Also, really helped in developing survey questions or focus group conversation questions that are, would be much more richly appropriate and able to bring out responses that are maybe more relatable, I guess in a way, to the participants so that they don’t feel like it’s such a clinical or objective type of question. If they were able to use the language to maintain the integrity of the study but using language that is going to be more appealing or accessible to the participants that we’re trying to reach (Participant 4)”.

Data credibility and pursuit of TI research are compromised by excluding and not accounting for the participants’ disclosure and expressions of traumatic or stressful life events and emotions from the research space and results.

“I think if we’re doing it right as researchers, you do want to be in a place where you’re creating a space for people and emotions. And there’s room for that, and there’s a way to be able to talk about that when you report the findings. You know, and that’s the fun part about qualitative research. I would say that that’s actually what drew me to it, right is the interaction with people and catching emotions, and it’s not always the responses is everything with it right collectively that the adds a lot of color to the phenomenon that you’re studying so why not make space for people’s emotions in real-time? Um, as part of data collection and even analysis and how you report it out”.

The CRD presented additional opportunities for TI- interactions and a shift in their research focus after study participants recounted the “anti-Asian rhetoric that was spewing in the community, in our society,” facing Asian communities during the height of the COVID-19 pandemic. The co-researcher portrayed reflexivity and humility in “how we [research team] collectively addressed it [trauma]” and

exemplified how context often shapes the data collection environment. A natural, TI-short-and-long-term response focused on safety planning. His research team *“proactively include[d] questions or topics and make these... the focus group conversations... and networking conversations, and how we can create space so that people felt comfortable sharing or asking questions.”*

“We need to talk about and make space and our conversations around how organizations are dealing with supporting their communities who are potentially experiencing anti-Asian hate crimes, as well as resources for their staff to encourage them to think about safety planning and self-care for their staff, because some of the organizations have shared experiences of discrimination, or, just, yeah—sadly, hate crimes”.

As TI research emphasizes a learning mindset, humility in adapting study methods and materials in response to culture, accessible language, and understanding of the local community context and climate, peer-supportive TI interactions that foster open, empathic, and validating group spaces become more commonplace. *“Creating the space to let the experts in the room actually show up. But there’s also something to validating, right? That person is an expert in—so being able to call attention to it with the group. I think also could go a long way.”* Trauma-informed research extends the researcher’s role from someone who collects quality data to one who fosters connections. *“We have to build rapport because we want people to feel engaged. We want to understand that we do have a level of empathy and that we are there, there to be supportive and be very helpful.”*

Um, and I think the pandemic is helping us all, even just having more empathy and recognizing that it takes A LOT to be a WHOLE HUMAN BEING, these days, right? And you never know what people are going through and so if we could get a place where we lead from a place of empathy and understanding, I think that we can definitely go a long way.

Again, listening and asking permission if they would like to share after validating is critical, because people may not want to discuss what might be coming up for them and researchers must be mindful of their autonomy and privacy.

... This is really when *‘the pause’* becomes important for me. Because in my training, I’ve been taught to ask the participant, *‘Is this something, you know—you validate that you, you understand or you see that, they’re having a distressing experience, but as, but as*

the moderator, it's really your responsibility to ask permission. If that participant really want to share that—that memory, or that experience, we can't take for granted that just because this emotion has occurred, that they really comfortable enough to share and so I think we have the responsibility to always ask, 'Is this something that you are comfortable sharing?' And again, where the pause becomes so important".

Several co-researchers' subtext emerged from the discussions on the relevance and supportive practice of listening and hearing local knowledge, strengths, language, and structural-social barriers and pivoting: adaption in the research process and translational community action. For example, by attuning to language, researchers can understand the complex social processes involved in 'structural elements and lived experience' and identify the language folks use that could contribute to social solutions.

Safety through critical reflexivity and self-awareness is the backbone of TIA pedagogy. In addition to supporting humility in modifying study procedures, it opens oneself and the research team to observe, reflect, and question your engagement practices, implicit biases, and assumptions about people, and question "What is our role in this?" An example of reflexivity occurred when most of the co-researchers voiced that the pandemic pressured research teams to grapple with their role in supporting study participants' needs, particularly concerning the pandemic (i.e., vaccine and testing access; language access to pandemic-related policy and announcements, housing and health support). Some described how the pandemic opened the door for research teams to contend with their role, in general, in conducting research alongside glaring social and health inequities. The act of engaging in this reflective dialogue is another example of praxis. The discussions illuminated possible responses. One idea was "how the interview and research experience could work to address the issues that the participants voice, with the caveat that this has to be authentic and feasible?" Trauma-informed research considers how the research from the study project could translate into action (e.g., education or support) with the community. Second, many co-researchers encouraged study projects "to build networks of support" to refer or connect study participants to resources. They emphasized learning about the local resources and establishing relationships within the community. For instance, "So I think

about the responsibility to build those networks of support... but having some networks of support that falls outside of the particular bounds of the study". Others agreed that preparing context-specific resources and strategies would be helpful when interacting with people with unmet social and health needs.

Several research reflexivity examples include, why are we asking the research questions? How are we reacting to the study experiences? What emotions am I expressing and acknowledging? (i.e., data collection and research team interactions; evoked by place-based reactions, implicit biases; recalling personal memories, traumatization, and vicarious traumatization).

"It's uncomfortable though [the pause], right? I think that the thing—that you have to be in control of your own kind of emotions and whatever is sparking up in you, within us, so that you get the information that you can really hear, right? What's really happening? And I know with me... feels like a gut punch just being quiet and not moving on the next question and just allowing people to share. And being thankful... that you were able to create an environment where people felt like they could share, right? How many times have we participated in focus groups or interviews where people, they came to share, but didn't feel like it was a safe space? So, I think, it's also a gift, and knowing, in that—that has a lot to do with the researchers and that environment, but it's tough. It's tough [co-researcher conveying humility]".

Moreover, what support do we have for members of the research team?

Trauma-informed research emphasizes a learning mindset. By fostering open, validating, and peer-supportive focus group spaces, participants felt safe expressing emotions, which may prevent distress or retraumatization and enrich the quality of the data.

vi. **Theme 6. Who and what to include in the research process? Preparing the grant application and study project protocol: Considering human capital, budget, and timelines**

The sixth theme that emerged was that TI research practices proactively begin with preparing the funding application and study project proposal phase. Whom should we bring to the table? What relationships should we pursue? A robust discussion emerged about the imperative

of preparing budgets to reflect the priorities of collaborating with the community that the research project seeks to engage. The sub-themes below present the discourse. I present several quotes to underscore the necessity of linking the capacity of the research team to engage in TI interactions with the study leadership's commitment to building a TI research study project through intentional and structural decision-making. "Buy-in" from leadership and their commitment to TI practices and interactions is solidified through the research proposal and budget-making process.

(1) **Developing the research aims with people in the community that we seek to engage**

Prioritize the study aims with local communities.

"Before the study even began, before we even started looking for funding, we went to the people in the community that we wanted to do research about and said, like, 'this is our skill, like, we're researchers. This is our skill...What kind of research will be beneficial for you? What type of research do you wish someone was asking so that you had those answers? And then, like, built into the funding' (Participant 1)".

"...what 8 said, like it resonated...the design and being really aware of how the design intersects with the people who you are, who you are studying, or who you are including in your study. It's like there's not a lot of awareness about what's going on with communities and I think that's the responsibility that really needs to be aware of what are the things that the communities that you're studying are facing? Period. Just in life? In general? (Participant 3)".

"The Co-PI, the lead of the project, have rich histories with working with different communities and connections with mental health, so I think that, again, really helped to formulate a team that was more holistic, or multidisciplinary, and not just focused on the, specifically the narrow research expertise (Participant 4)".

(2) **Budget well-paid positions with decision-making capacities for people with lived experiences similar to the community: "Be prepared to give up your power"**

Trauma-informed research intentionally hires an inclusive team with similar experiences and characteristics representing varying aspects of the community and shares

decision-making power. A co-researcher described the benefits of assembling a community advisory board (CAB) with representatives from the community and CSOs.

“There should be paid positions for people with that lived experience, you’re like, researching. And, you know, that you’re going to be working with a specific population or people that have experienced that sort of thing, there should be paid—and well-paid—decision-making positions in the project [several co-researchers nod their heads], so that as you’re developing the project before you even meet up with a participant, there’s already been someone with a lived experience in the room, to say, guys, you can’t ask a person—not without hurting them... We actually had it written right into our grant application that all paid positions had to, because, you know, we’re a study for trans folks, so all paid positions had to be for trans folks, and um, we have a community advisory team that we have an obligation to meet with on a regular basis. That is, community members, but also organizations that work with trans folks. And we also, in our funding, we based our compensation for the community advisory team, on, um, what a livable wage is in this city, this extremely overpriced city that I live in (Participant 1)”.

“I love hearing, I think it was, it was 1 talking about how like bring folks in and make sure they have some decision-making power in defining the study—the defining how things are carrying out, defining what is appropriate, what is not...if you bring in folks from the community to the table be, like, prepared to give up some of your authority—to give up your power to allow them to make decisions (Participant 3)”.

“...making sure that there’s robust representation on our team (Participant 2)”.

Reflecting back on it now, I think the research team and the folks who coordinated the conversations and the focus groups, I think, did a really, I mean I’m really proud of how we—we collectively addressed it [response to Anti-Asian rhetoric and hate crimes that surfaced in the focus groups]. *And I think partly that is because the research team was made up of—that we had a diverse group. And we had folks who identify, including myself, as Asian and Asian immigrants or Asian Americans and South Asians and other communities of color, folks represent people from different communities of color who also could understand this feeling of ‘being other’, discriminated against, and bullied...* (Participant 4)”.

“...there clearly was some level of intentionality and how you [to 4] all went about picking your research team, right? And making sure that you had folks at the table that represented the communities that you are seeking to work with” (Participant 13).

(3) **Budget mental health and trauma-informed experts from the community and higher education**

“Invite members of the research team who have experienced—who are trauma-informed to be part of the research team, whether they may be, you know, faculty, experienced

researchers, or graduate students who are—who have experience in trauma-informed topics (Participant 4)”.

“Now, I agree with what you said, in terms of you reaching out at the start of the project, being able to enlist some folks that already have some, some of that formal training...being able to consult someone... so having some trained folks at the table is important (Participant 13)”.

“...but also amongst the team, there were experts who had a long histories or experiences working in direct service, mental health, or trauma in different communities. Um, and I think my addition to the little bit of research that I’ve done and participated as a facilitator, a big chunk of my career has been in direct mental health trauma crisis intervention. So, I think that kind of serendipitously created a team, where we were able to recognize, you know, myself and some other folks who had mental health experience, kind of noticed the feelings and how the world was affecting each other as well as the folks who we’re working with” (Participant 4)”.

“Employed a social worker to be a consultant when people [researchers] are, you know, wanting to talk a little bit more, process things they’re reading [gun violence court transcripts]. So, I see some things like that, where, yes, it’s baked into the protocol and it’s been really helpful...that’s in the researcher level, not with participants” (Participant 12).

“For the study I am on right now, we actually have a registered counselor on retainer for participants and interviewers, just in case something comes up in an interview...going to be rare that people will access that service. It’s not a counseling service, so much as a debriefing. But, you know, to have that—those things in place, ahead of time, in case you need them. If, if your funding will allow it. And available to us because we asked for it in the funding application and it wasn’t something that came up afterwards. So we had already planned for it (Participant 4)”.

(4) **Budget financial compensation for community-strengthening organizations’ collaboration (space, time, knowledge, skills)**

Budget financial compensations for CSO collaboration for their knowledge, skills, time, and use of space. “That being said, nonprofits, are, you know, really under-resourced. So, we would often ask researchers if they could compensate us, you know for the hours that they were in our space, then at least, you know, our support worker.”

Budget preparation and writing a decision-making plan into the grant funding announcement solidifies the commitment and accountability to shifting the power dynamics and pragmatically builds in the resources to achieve the projects’ collective goals. Trauma-informed research prioritizes fostering

collaborative relationships within the community they seek to engage and mental health connections. The intentionality in a participatory, inclusive process such as this stimulates the possibilities of listening, learning, and action while challenging the features of mistrust, including taking, dismissing, not listening, avoiding, and inaction. It can contribute to academic-community productive research space to create TI-culturally sensitive materials.

vii. **Data triangulation synthesis: Emergent trauma-informed recommendations for integration in research praxis**

Data triangulation illuminated a meta-theme: TI research confronts oppressive research structures and practices and toward restorative processes and interactions. The CRD discourse described the oppressive research structures, practices, and TI interactions and practices that conversely initiated trust-building and expressed a commitment to restorative research approaches. The CRD emergent themes 1-6 align with the 9 TIPs defined in the results section.

Cutting-across domains, the CRDs revealed that TIP 8 and TIP 4 are essential for the TIP 2 development of safe interactions and TIP 5 capacity for trusting collaborations and fostering peer support.

To support researchers in integrating the TIA in their research praxis, Table XXXV below synthesizes the triangulated emergent themes. Column 1 identifies the research functions; column 2 synthesizes the potential benefits of this approach, and column three highlights the associated TIPs.

6. **Discussion**

I anticipated the CRDs would generate TI guidelines for interactions occurring within the research context. However, the emphasis on producing guidelines does not reflect the co-researchers' experiences and discourse. As reflected in the CRD data and triangulation with the best practice literature and archival data, guidelines imply a one-size-fits-all. They inherently do not "fit" the intentions of TI research and align with TIPs. The CRD dialogue foregrounds the local community's

TABLE XXXV.

DATA TRIANGULATION SYNTHESIS: EMERGENT TRAUMA-INFORMED RECOMMENDATIONS FOR INTEGRATION IN RESEARCH PRAXIS

Meta-theme: TIA confronts oppressive research structures and practices and progresses toward restorative processes and interactions		
Integrating TIA Recommendations in the Research Process	How Can the Incorporation of TIA Support Traditional Research Goals?	Aligning TIPS
1. Preparing the Grant Funding Application and Study Project Protocol: Considering Human Capital, Budget, and Timelines Counters Oppressive Research Practices (integrates data from themes 1 & 6, archival, and best practice literature)		
<i>1.a. Include Local Community, Practice, and Academic Experts in the Grant Application and Study Project Proposal Development and the Formation of the Academic-Community Research Team</i>		
<p>Budget preparation includes competitive, livable wages for all study personnel and CAB participation.</p> <p>“Intentionality in how we’re engaging folks and selecting the research team” and, if relevant, CAB. Ensure several folks are at the table representing the communities the study project seeks to engage. Include CSO representatives and community leaders when assembling a CAB. Bring aboard folks that speak the languages spoken in the community.</p> <p>Include members of the research team and CAB with knowledge and experience working with community mental health and trauma. If working with communities that share collective trauma, include personnel and CAB members with local trauma and resilience expertise. By attending to culture and context (Substance Abuse and Mental Health Services Administration, 2014), the research team and study project may understand how the community experiences collective trauma and resilience.</p>	<ul style="list-style-type: none"> • <u>Recruitment</u>: Access to communities of interest. • <u>Research Design</u>: develop research questions, data collection, and analytical methods with the local community, academic, and practice experts to match better the study interest and translational aims with the communities’ priorities. • <u>Data quality</u>: In collaboration with community members, develop language-specific and culturally and placed-based responsive data collection materials (study design, survey, and interview questions, protocols) to enhance credibility or internal and external validity of the data collection and minimize potential harm, such as retraumatization. 	<p>1, 2, 3, 5, 6, 7, 8, 9</p>

TABLE XXXV.

DATA TRIANGULATION SYNTHESIS: EMERGENT TRAUMA-INFORMED RECOMMENDATIONS FOR INTEGRATION IN RESEARCH PRAXIS
(Continued)

<p>The grant application and project proposal include (1) contributions from multiple members who represent some aspect of the community in which the project seeks to engage and (2) a plan for how the academic-community partnerships will make decisions and share resources.</p>	<ul style="list-style-type: none"> • <u>Retention</u>: Positive and safe research interactions support participant retention and future partnerships. • <u>Ethics</u>: Do not harm. 	
<p><i>1. b. Budget sufficient resources for the study personnel, community partners, and participants to meet the study goals and increase safety.</i></p>		
<p>Budget one debriefing session per person with a counselor for study personnel and possibly study participants for studies researching sensitive research topics.</p>	<ul style="list-style-type: none"> • <u>Ethics</u>: Do not harm. • <u>Retention</u>: Positive and safe research interactions support participant and personnel retention. 	2, 6, 7, 9
<p>Budget appropriate participant and CAB member incentive amounts and types of incentives (e.g., cash or gift cards) to reflect their needs and time.</p>	<ul style="list-style-type: none"> • <u>Recruitment</u>: increase the number of participants. • <u>Retention</u>: increase the probability of study completion. 	4, 8
<p>Budget compensation for community spaces for research requests (i.e., hosting interviews, focus groups, mobile clinic visits, survey completion, recruitment at events, offering supportive services if participants experience distress).</p>	<ul style="list-style-type: none"> • <u>Recruitment</u>: Provide local options to complete the study activities by reducing the participants' commute and time burden; Ongoing, reciprocal relationships with community spaces may increase academic-community social networks and trust, which may enhance recruitment and retention for current and future studies. 	3, 4, 8

TABLE XXXV.
DATA TRIANGULATION SYNTHESIS: EMERGENT TRAUMA-INFORMED RECOMMENDATIONS FOR INTEGRATION IN RESEARCH PRAXIS
(Continued)

	<ul style="list-style-type: none"> • <u>Retention</u>: increase the probability of study completion and the participant's promotion of future study projects. <p><u>Data quality</u>: the potential to increase the credibility of the data by collecting it in a trusted neighborhood space</p>	
<p>Create realistic research process timelines and activities that include the time and resources for the research team to:</p> <ul style="list-style-type: none"> • Communicate with other researchers and administrators at their university or collaborating institutions who engage with the community to reduce the community burden of multiple university requests. • Get to know the local place(s), communities, and resources. How are local organizations supporting their communities (e.g., access to Covid-19 resources, vaccinations, testing; safety planning for police violence, hate crimes, community violence, domestic violence, affordable housing; health care access; education/childcare access; employment; legal support)? • Learn the history of the place and community you seek to engage. • Prepare to communicate with the appropriate language and with cultural humility. 	<ul style="list-style-type: none"> • <u>Ethics</u>: Increase opportunities for not harming participants, community partners, and members of the research team • <u>Recruitment and retention</u> of study participants, community partners, and research team members. Authentically learning and engaging while nurturing safe, trusting spaces may increase recruitment and retention and promote social networks and positive social support <p><u>Data quality</u>: By strengthening participant trust and opportunities for community participation, community members may wish to offer input in the data collection materials or study processes, which has the potential to increase TI materials and increase the credibility and validity of the data</p>	<p>1, 2, 4, 3, 5, 6, 7, 8, 9</p>

TABLE XXXV.
DATA TRIANGULATION SYNTHESIS: EMERGENT TRAUMA-INFORMED RECOMMENDATIONS FOR INTEGRATION IN RESEARCH PRAXIS
(Continued)

<p>Integrating TIA Recommendations in the Research Process</p> <p><i>These recommendations align with the aforementioned research practices and TIPs</i></p>
<p>Create a resource guide relevant to the research topic and with community assets to support SDOHs (i.e., housing, healthcare access, Covid-19 updated guidelines, loneliness)</p> <ul style="list-style-type: none"> • Modify the research design, study materials, and interview experience with humility to reflect the community's input. Integrate a plan for how data disclosed about current trauma or distressing memories will be handled once collected. Determine consistent responses or TIPs across interviewers in responding to participant distress or disclosure of current trauma. • Receive training about trauma and its impacts from community trauma and mental health experts. Include educators with experience in collective trauma and resilience from the community and place involved with the research investigation (see Recommendation 2 below). • Engage in co-researcher peer support debriefs to process sensitive and distressing data collection experiences. • Encourage and allow time for research team members to engage in self-reflexive journaling. • Normalize with the research team that reading transcripts, literature, and content about traumatic experiences, such as interpersonal violence and racism, can evoke vicarious or secondary trauma for people. • For study personnel who may be experiencing vicarious or secondary trauma from the study project, consider recommending that they process their experiences with a therapist credentialed in the evidence-based <i>Cognitive Processing Therapy (CPT) Protocol</i> or provide them with the <i>CPT for PTSD: A Comprehensive Manual for PTSD</i> (Resick et al., 2017) to work through.

TABLE XXXV.

DATA TRIANGULATION SYNTHESIS: EMERGENT TRAUMA-INFORMED RECOMMENDATIONS FOR INTEGRATION IN RESEARCH PRAXIS
(Continued)

(2) Planning Training Research Team Members to Raise Awareness of Trauma, Their Role, and Integration of TIP in their Daily Interactions		
<ul style="list-style-type: none"> Engage the research team in training and co-learning on what trauma is and its impact, using contextual and cultural perspectives. <ul style="list-style-type: none"> Include local community, academic, and practice experts. Offer ongoing participatory workshops focusing on different aspects of the research process (e.g., informed consent, recruitment, relational practices, survey development, interviewing, analysis), the ecosocial context of trauma and resilience, and highlight understanding across diverse, intersectional communities. Include resources from the experts, peer-reviewed, and best practice literature. Make space for co-learning and co-development about how the study project can best bring a TIA to the specific research process by encouraging co-researchers' reflection and dialogue about their previous experiences, responses, and TI-education. Emphasizes the process of learning and generating context-specific guidance, prioritizing co-learning, dialogue, and self-reflexivity. 	<ul style="list-style-type: none"> <u>Ethics</u>: Increase opportunities for not harming participants, community partners, and members of the research team <u>Recruitment and retention</u> of study participants, community partners, and research team members. Authentically learning and engaging while nurturing safe, trusting spaces may increase recruitment and retention and promote social networks and positive social support. <u>Data quality</u>: By strengthening participant trust and opportunities for community participation, community members may wish to offer input in the data collection materials or study processes, which has the potential to increase TI materials and increase the credibility and validity of the data. 	<p>1, 2, 4, 3, 5, 6, 7, 8, 9</p>

TABLE XXXV.
DATA TRIANGULATION SYNTHESIS: EMERGENT TRAUMA-INFORMED RECOMMENDATIONS FOR INTEGRATION IN RESEARCH PRAXIS
(Continued)

<p>Integrating TIA Recommendations in the Research Process <i>These recommendations align with the aforementioned research practices and TIPs</i></p>
<ul style="list-style-type: none"> ● Stay open and empathize with others' experiences and emotions. ● Be open to the possibility that no matter what the questions are, and the focus of the research, there may be a possibility that someone will bring up a traumatic experience or topic. There is no way of telling what might trigger someone's memory of an adverse event. Have ideas as to how to address it. ● Emphasize "openness to listen...Encourage researchers to think deeply about what they hear at the moment." If there are multiple participants, community partners, or co-researchers, let "that space organically produce a discussion about the trauma experience, step back from the research agenda at that moment, and let that take place before proceeding." ● Utilize "the pause" during interactions. For example, rephrase (if necessary), validate, and say, "Is this something you feel comfortable sharing? Pause. Create space for responses. Listen." ● "State simple phrases to let the person know you heard them, and their experience and emotions are valid. That person is an expert, so being able to call attention to it, validate it with the group." ● "Remind researchers that their job is not to be a therapist or to become a counselor, nor to make the situation better. Their job is to foster an open, safe space." ● Encourage and allow time for research team members to engage in self-reflexive journaling with prompts related to how their experiences, emotions, and memories may affect their interactions with the study participants, colleagues, and partners.

strengths, the climate and culture in which the research occurs, and the community's structural and social barriers. Learning about the community's collective history of trauma, resilience, and healing is a significant component of adapting TI research practices and interactions. Develop TI training with community mental health and trauma experts and an academic or practitioner specializing in trauma. Trauma-informed research training planning conversations can reference these guiding emergent themes. Attend closely to TIP 4, responsiveness and humility, and TIP 5, collaboration and peer support, and anti-oppressive praxis, which extends TIP 8, cultural, historical, community context, including racial, ethnic, gender and sexuality, and class injustices.

The CRD thematic analysis and data triangulation identified a meta-theme: Applying TI research confronts oppressive research structures and practices toward safe and restorative processes and interactions. Multiple co-researchers recommended combining an anti-oppressive lens and teaching anti-oppressive principles to research teams as part of TIA training. Many co-researchers described the nature of oppressive, traditional researcher practices, labeled as “managing oppression,” and illuminated how they actively worked to circumvent it in their daily interactions. The dialogue showed how traditional research structures and practices reinforced oppressive operating forces and distressing interactions.

Across the CRDs, deep, complex discussions articulated that TI research is anti-oppressive, emphasizes safety, and aims to subvert power dynamics between academia and communities and study PIs and their research teams. Machtinger et al. (2015) recommended similar guidance for implementing TI primary care, “Power differentials among staff and between patients and providers are acknowledged and minimized” (p. 195).

Oppression is the bedrock of trauma. To engage in a TIA means to disentangle and dissemble implicit and explicit oppressive systems and practices. However, this is not concretely stated in the initial foundational TIA literature (Substance Abuse and Mental Health Services Administration, 2014) nor in all

definitions of trauma. Trauma-informed principles 8 and 9 overlap with features of an anti-oppressive lens but are less specific. GBV research emphasized that TIP 9 is “resilience, recovery, and healing within the local community and context” (Warshaw et al., 2018). The National Center on Domestic Violence, Trauma, and Mental Health advocates an intersectional feminist TIA approach, agreeing with the CRD findings that underscore TIPs 8 and 4. TIP 4 is “cultural humility and responsiveness” (Substance Abuse and Mental Health Services Administration, 2014; Warshaw et al., 2018). In their scoping review, Jefferson et al. (2021) recommended a TIA and social-ecological approach toward addressing oppression-based trauma, such as “systemic, cultural, historical, or racial trauma in public health research” (p. 2). Crooks et al. (2021) called for attention to ethics at the intersection of COVID-19 and Black Lives Matter—their recommendations aligned with the CRD insights. Scholars must understand the impact of ongoing trauma and historical context, hire diverse research teams, and engage in honest and open dialog with Black communities to improve their capacity to respond to their needs.

The CRD dialogue contrasted the anti-oppressive praxis with the more traditional approach. The conventional processes of securing grant-funded research create a structure that places the funding agency and the academic researchers as the experts in defining the research goal and designing the study and data collection materials. Traditionally trained researchers tend to respond to and collect data only pertinent to the specific research questions, often overlooking or passively responding to the real-time situations and disclosures that arise throughout the research process. The co-researchers' experiences and archival data demonstrated a disconnect with the timelines needed to engage in meaningful relationships with community partners and members across time and space. For instance, developing and sustaining community partnerships and involving members of the community being researched in decision-making capacities (e.g., CAB, competitively, paid members of the research team) requires time and space needed with the participants to account for listening, empathy, human interactions; learning how to respond to participants' requests or questions regarding resources, for

example, access to medical care for the issues being researched or for "unmet needs"; and data collection related to the research projects' goals.

Theme 2 is "Strength-based Praxis: TIA is Open to the Possibility... that Someone will Bring up a Traumatic Experience or "Topic" when "Interacting with a Human Being" emerged directly from the discourse. Through the reflection and sharing process, the co-researchers agreed that it does not matter what the health or social research topic is. Research praxis should be TIA. The Substance Abuse and Mental Health Services Administration's (2014) definition of trauma underscores its subjectivity. Whether someone identifies that they experienced a traumatic event, trauma, or stress symptoms is highly personal and variable across time and space. Researchers should be prepared that any topic of conversation could spark emotion and make room in the interview or research process for their expression and supportive human interaction. Given that those communities who experience racism and oppression from systems and resources are often recruited for research studies raises the importance of integrating a TIA praxis.

Table XXXV presents the emergent TI recommendations for integration into everyday research practices, resulting from the synthesis of qualitative analysis and data triangulation. It integrates the six emergent themes, which include 1) The nature of oppressive, traditional research practices: "I am managing a level of oppression" and a victim of an oppressive system; 2) "strength-based" praxis: "everyone experiences trauma" and "no matter the focus of the research, there may be a possibility that someone will bring up a traumatic experience"; 3) the core feature of TI research is safety: "do not inadvertently do harm" and researchers proactively foster safe spaces and learn how to respond to varying degrees of distress; 4) planning TI research foundational training with experts from the community that the research project seeks to engage and academia; 5) how to engage with trauma awareness? Embrace a learning and caring mindset with others and oneself; and 6) who and what to include in the research process? Preparing the grant application and study project protocol: considering

human capital, budget, and timelines. The table identifies two TI- anti-oppressive practices that consist of (1) preparing the grant funding application and study project proposal: Considering human capital, budget, and timelines, and (2) TI interactions: training research team members about trauma and their role. Each practice includes several action items.

My findings illustrate that many co-researchers employed TIPs in their research practices but did not explicitly label them as such. All seek to integrate TIA guidance into their research practices and interactions. Many favor a repository of TIA best practice recommendations, ongoing TIA training, and co-research debriefs or workshops to further develop this effort. The CRDs elicited participatory reflection from the co-researchers, which formed and modeled TIA recommendations to counter oppressive practices. Several co-researchers not only spoke to the intentionality of the research team to create space and resources for the natural relationship-building processes that often form the foundations for several TIP, including trust, safety, collaboration, peer support, cultural humility and responsiveness, resilience, and potentially healing, they modeled it in their interactions with one another.

Safety is the core TIA recommendation. It is concordant with Andrews et al. (2019) safety emphasis on reducing opportunities for retraumatization across all spaces of research conduct. SAHMSA's (2014) general priority is to prevent re-traumatization and my archival data. The CRDs and TIA best-practice literature agree that promoting safety and ongoing trust-building is essential. As presented in the CRD evidence and elaborated in the archival data, trust-building interactions, and research practices promote safety, influencing collaboration in the study design, methodology, data collection materials, and protocols. A TIA and anti-oppressive lens strengthen qualitative and MMR data quality and effective research processes, including recruitment, enrollment, engagement, and retention. Collaboration, shared decision-making, and humility are vital proactive practices to promote safety and opportunities to enhance the internal and external validity of the data collection materials. The degree

of safety, and thus data credibility, may increase when the researcher intentionally fosters a peer-supportive, empathetic, and validating data collection environment, or in the words of a co-researcher, “the space to let the experts in the room show up.” Many co-researchers agreed that TI research creates a safe space for people and their emotions. Although safety promotion and retraumatization prevention are at the core of a TIA, the research literature lacks explicit linkage to TIA theory and the TIPs conceptual framework. Instead, research ethics articles support such methodological considerations.

Downes et al. (2014) critique the scrutiny of sensitive topics and vulnerable groups of ethics committees. The Common Rule (Federal Policy for the Protection of Human Subjects) requires researchers to assess the risk-benefit of asking study participants about their traumatic experiences. Seedat et al. (2004) call for a framework that ensures human rights and justice. They recommend that in any study focused on trauma, the integrity of the dignity of trauma survivors should be weighed against the goals of scientific inquiry and draw on beneficence as the guiding principle. On the one hand, sharing their experiences with an objective listener may be a positive experience, with some characterizing it as an opportunity to give testimony to their experiences, cathartic, therapeutic, or empowering (Downes et al., 2014; Griffin et al., 2003; Syeda et al., 2021). Downes et al. (2014) caution against assumptions that survivors will experience inevitable retraumatization but do not want to minimize the risk.

In contrast, survivors are skilled at navigating risk and harm to themselves and their children (Cavanagh, 2013). Griffin et al. (2003) found high tolerance across samples engaging in various assessment procedures inquiring about experiences of domestic violence (n=260), rape (n=108), and physical assault (n=62). Conversely, other people may experience re-traumatization and distress (e.g., fear, shame, anger, despair, grief), particularly in the research context, and recommend that appropriate actions are in place (Affleck, 2017; Henderson and Jorm, 1990; O’Mathúna, 2010; Syeda et al., 2021).

As emerged in the CRDs, others found that survey and interview questions asking directly about trauma pose a risk of retraumatization, including traumatic life experiences, mental health symptoms

(e.g., acute stress, post-traumatic stress, depression, anxiety, dissociation), physical health status, quality-of-life, and functioning (Seedat et al., 2004). For instance, Syeda et al. (2021) recognized that there could be risks in explicitly asking youth about their relationship abuse and trauma. These risks may increase among youth communities that face several inequities that often lead to more interpersonal violence and trauma across one's life course. Questions about relationship abuse and violence might also remind vulnerable youth of traumas triggered by family, community, systematic, or historical violence and oppression that may cause some people mental distress (Syeda et al., 2021). Some participants may experience challenges reintegrating their experiences at the end of the interview, and any unintended distress incurred can persist for some time (Henderson and Jorm, 1990).

Downes et al. (2014) cautioned that survivors of violence potentially face harm by establishing safeguards that make it challenging to include them in research studies. Instead, they recommended participatory processes and interactions through an empowerment approach congruent with the CRD findings, archival data, and TIPs. Engage survivor and perpetrator study participants as "active agents and stakeholders," invest in the "development of skilled researchers," improve "situated processes of informed consent and confidentiality," and "continue to discuss and share practical experiences of feminist research practice that seeks to deliver justice and social change" (Downes et al., 2014, p. 1). Co-designing tools with communities is a strategy to mitigate re-traumatization risk (Andrews et al., 2019; Seedat et al., 2004). Syeda et al. (2021) shared their experience co-creating an evaluation approach for a healthy relationship program with community partners. The researchers explained that asking participants to answer numerous questions about specific traumas is incongruent with their strengths-based approach and time-consuming. After discussions with their community partners on the safe and sensitive methods to measure cumulative risks and adversity with youth, the academic-community partnership opted to use a single-item continuous scale on the youth surveys. The item requests participants to mark the overall rating of their life challenges on a line considering both the number and

severity of those challenges(Sullivan et al., 2019; Syeda et al., 2021). This minimal burden estimate is expected to decrease the likelihood of participants experiencing distress (Evans et al., 2013; Kessler et al., 2010).

The CRD and archival data exploratory findings demonstrate a need for further research to examine how TI research could impact the study goals. This study suggests that forming research questions and data collection materials with the community may enhance data credibility and trustworthiness, increase participant safety, and increase recruitment and retention support. While research relating TIA to these outcomes is under-addressed in the literature, CER and CBPR evaluation articles show agreement (Joosten et al., 2015).

The findings show that researchers need time and support built into the budget, timelines, and everyday practices to collectively and individually work through the various questions, reflections, and praxis that arise when interacting with participants, each other, collaborators, and data when trauma or distress is expressed. Please refer to Table XXXV for specific recommendations. Trauma-informed approach evidence-based literature acknowledges that the people working with communities experiencing trauma may experience vicarious trauma and retraumatization of their histories. Several co-researchers emphasized the need to examine assumptions, biases, and connected behaviors in research-related interactions and practices. Malacrida (2015) highlighted the importance of researcher well-being and asserts that the research process affects the researchers' values, emotions, and standpoints and recommends the creation of space for their research team members to engage in reflexive journaling. Analysis from reflective journal entries from members of a research team engaged in emotional research exposed the emotional effects of the research project, the implications of hierarchical power imbalances on research teams, and the value of providing reflexive writing opportunities for research team members about the challenges of engaging in emotional research. In qualitative research, it is standard for researchers to concern themselves with the effects of their

standpoint and values on research topic selection, data collection, analysis, and power relations with participants, but often do not recognize the burden on members of the research team, particularly those interacting with study participants and community partners as part of their daily responsibilities, who are often graduate students (Malacrida, 2015; Orr et al., 2021). Orr et al. (2021) discuss that the personal impact of emotional work on the researcher often goes unaddressed and is at risk of mental health challenges. A scoping review of dissertations found that less than 5% specified a plan to reduce the mental health risk to the scholar, suggests a gap in guidance on minimizing the risk of emotional distress, and recommends the application of trauma and violence-informed principles to the supervision of graduate student policy and practice (Orr et al., 2021).

7. Limitations

A limitation in the CRD discourse was time to explore further recommendations for TI research training in teaching how trauma can affect peoples' emotional reactions, physiology, and memory, how to recognize some of these effects, and whether follow-up is necessary. The discussion provided minimal details on how to carry this out. My archival data and TIA best practice literature addressed these topics, but I did not include them in the analysis or results. I recommend that future CRDs explore these themes and bring in experts on trauma from the community, practice, and academia.

A second limitation was in the CRD guide. Given the robust discourse, we did not have time to dive deeply into domain 5: how trauma, distress, or TI interactions might impact research goals. This domain aimed to gain focused insight into how recruitment and retention efforts and data quality may or may not be impacted by trauma, distress, or TI interactions. However, my archival field notes supplemented the co-researchers' naturally discussed experiences and reflections that offer preliminary insights.

A third limitation is that I collaborated with co-researchers as the sole coder and analyst. My study lacks interrater reliability and member-checking. Refer to Table XXXI—strategies to Ensure Trustworthiness.

8. **Implications for practice**

Trauma-informed research interactions, leading from an anti-oppressive praxis, ask how we engage folks. Praxis –the questioning, critical reflexivity, and the research team’s ongoing dialogue– are essential to TI research. How are we attending the TIPs? To safety and cultural responsiveness? Are we genuinely engaging with humility? What are our research practices, and how do we integrate humility? How can we be open to understanding that recommendations from community members might increase safety in the data collection process? How do we make sense of the inherent tension of objective and subjectivity and power dynamics in the research process? The co-researchers’ experience and peer-reviewed literature demonstrate the benefits of listening to what communities are saying and being open to learning their strengths, structural and social barriers, priorities want, traumas, and resilience, and integrating their contributions into the research questions, study design, and data collection materials. CBPR challenges researchers to engage in participatory analysis, interpretation, and shared authorship.

The development of TI research guidance strengthens the utility of the Anti-Oppressive Praxis for CHET-Research, organizing the research framework’s branch three concepts of applying a TIA to a research context. Given the resounding impact that research as an institution has historically and continues to echo in furthering mistrust in many communities, there is substantial space for reimagined research praxis. The health science community faces an extraordinary time of vast inequities, raising further questions about our accountability and role. Pinderhughes et al. (2015) framework for addressing and preventing community trauma introduces strategies that support TIP 9, resilience,

recovery, and healing within the local community and context and several of this study's TIA recommendations.

Trauma-informed is complementary to CBPR, CER, and PAR. TIP resonates with intersectional or critical feminist and anti-oppressive epistemologies and ontologies. The co-researchers gave voice to the trauma and distress produced by power dynamics and traditional research practices that are experienced in the daily interactions with participants, collaborators, and members of the research team and that are excluded from data dissemination and transparent record. They revealed tactics to resist and circumvent restricting and harmful research protocols. Moreover, they co-created preliminary guidance for research teams to integrate TI interactions and structural practices into their daily responsibilities. The emergent findings agree with the TIA theory, TIPs, and archival data. Some evidence supports the benefits of CER to research practices, such as recruitment, retention, the adaptation of the study design, and data collection materials that align with recommendations from the community (Jefferson et al., 2021; Joosten et al., 2015). For example, the co-researchers in both CRDs modeled TI interactions, which enhanced data quality by elevating the dialogue's depth, breadth, and development of their experiences and reflections. Trauma-informed research was enacted by their capacity to co-learn while developing trust and expressing empathy and care. Although their research projects varied by study community, research goals, and discipline, and they had diverse experiences, they approached one another with dignity, respect, and curiosity. At the closing of both CRDs, most co-researchers were slow to leave the virtual space. They expressed the value of exchanging experiences and reflections among co-researchers from different projects and unpacking what applying a TIA within the research context looks like and accomplishes. Several co-researchers wished to continue the conversations and make spaces available for the evolving nature of the TI research.

V. CONCLUSION

I draw specific conclusions for my three aims, described in Chapter IV. Here I conclude by reflecting on the contributions of my scholarship to research and practice and the potential for a new movement in praxis and healing.

A. **Contributions for a Transdisciplinary Literature Synthesis of Chronic Pelvic Pain and Interpersonal Violence Using a Community Health Equity Lens**

Public health lacks representation in interdisciplinary chronic pelvic pain (CPP) literature. My dissertation contributed to reducing its gap. Transdisciplinary science seeks to integrate theories, methods, and research practices from multiple disciplines to explore new ways of approaching complex health and social phenomena. It includes lived experiences as knowledge from communities in which it engages. As a community health scholar, survivor, and researcher within transdisciplinary teams (i.e., prevention and intervention research for female girls and adults and sexual gender minority communities regarding bladder and bowel health), I bring an insider perspective to such a synthesis.

The additional scholarship could evolve from the existing synthesis. For example, (a) an examination of the relationship between CPP and interpersonal violence, (b) the implications from the evolving theoretical paradigms from biomedical to biopsychosocial, to social-ecological and life course theory, to social determinants of health model, ecosocial theory, and intersectionality, (c) chronic pelvic pain non-pharmacological community interventions. Further, it offers public health scholars a launching point for investigating CPP and related phenomena. Finally, it could be used within transdisciplinary or interdisciplinary teams interested in CPP to learn community health equity science discourse and theory.

B. **Contributions to Critical Public Health Theory, Praxis, and Methodological Development**

The culmination of my dissertation contributed to critical public health theory, praxis, and methodological development; I produced the following:

- Conceptual Framework: Ecosocial context of chronic pelvic pain among survivors of interpersonal violence (see Chapter III)
- Conceptual Research Organizing Framework: Anti-Oppressive Praxis: Community Health Equity Trauma Research (CHET-Research) Framework
- Study Protocol: Anti-Oppressive Convergent Phenomenological Mixed Methods Research Protocol: Healing and Resilience Experienced by Women Survivors of Interpersonal Violence with a History of Chronic Pelvic Pain
- Trauma-informed research guidance for studies investigating health and social phenomena, including Table XXXV Data Triangulation Synthesis: Emergent TI Recommendations for Integration in Research Praxis. The table organizes the TI recommendations by chronological order of research projects linked to crucial research practices and associated trauma-informed principles.

In addition to pursuing funding to pilot the study protocol, I intend to disseminate this work in peer-reviewed journals and collaboration with community organizations, health equity programs, and community health clinics. I hope the outputs can serve as a springboard for community health researchers, collaborators, and those involved in transdisciplinary teams for their praxis and adaptation.

Together these conceptual and methodological process outputs form a research agenda. My involvement with interpersonal violence research, activism, intervention, and health education offers a platform to extend my work. I pursued a doctoral degree in Public Health Community Health Sciences Division at UIC to dive deeply into the existing multi-disciplinary and interdisciplinary research and knowledge base and partner with research institutions and community organizations. My academic and professional knowledge accumulation, my healing journey, and my hearing from countless survivors and their allies raised the imperative of a transdisciplinary, embodied, and anti-oppressive approach to CPP with survivors and the broader connections between trauma and health. Equipped with these outputs

and the embodied knowledge and enacted praxis over this past decade, I am confident I can share these outputs for further refinement with survivors, interested organizations, practitioners, and community clinics to engage in social-ecological health planning and promotion activities.

At a deep, embodied level that connects my soul, heart, and mind, the poetry and theory of Audre Lorde (1984, 2007) in *Sister Outsider* guides my iterative reflective process of connecting theory with praxis and serves as hope during my research process,

But as we come more into touch with our own ancient, non-European consciousness of living as a situation to be experienced and interacted with, we learn more and more to cherish our feelings and to respect those hidden sources of our power from where true knowledge, and therefore, lasting action comes...carry within ourselves the possibility for fusion of these two approaches so necessary for survival, as we come closest to this combination in our poetry. I speak here of poetry as a revelatory distillation of experience... for women, then poetry is not a luxury. It is a vital necessity for our existence. It forms the quality of the light within which we predicate our hopes and dreams toward survival and change, first made into language, then into idea, then into more tangible action. Poetry is the way we help give names to the nameless so it can be thought. The farthest horizons of our hopes and fears are cobbled by our poems, carved from the rock experiences of our daily lives (p. 37).

C. Reflections on Praxis

1. Establishing dignity and knowledge integrity in basic science research

My dissertation purpose and methodology attempt to restore human dignity and knowledge integrity often lost in traditional, positivist research investigating interpersonal violence and CPP. This discourse, "dignity" and "integrity," draws on healing features -moving toward wholeness. To challenge me and demonstrate how research processes can serve as praxis for growth. Guiding this view is community psychologist and scholar Dr. Edison Trickett's ecological perspective (2008, 2009a, 2009b, 2011, 2019) conceptualization of community interventions as events in systems. Following that, interventions or, in this case, community research can produce reactions and meaning, intentional and unintentional, or ripple effects. Community health scientists grow opportunities to promote health that have the interests and needs of the communities we care about as people and invest in improving their

health outcomes. One way to do this is through intentionality in research frameworks, methodological approaches, and praxis.

The participatory action research (PAR) philosophy in Freire's (1970, 1994, 2007). Freire's (1970) pedagogy grounds my methodological stance. He calls for a theory of "transforming action," which requires the leaders to engage the participants in a central role that involves genuine opportunities for reflection (Freire, 2007p. 126). The leaders in PAR are the lead researchers, will provide coordination and at times direction and facilitation. Yet the lead researchers must foster authentic brave spaces for others' reflection and action (Freire, 2007, p. 126).

2. **Praxis and the potentiality of healing in context, with community**

Gomez and Yassen (2007) discuss praxis concerning healing in context, recalling Freire (1970, 1994).

Freire (1994) describes the process of liberation of mind, spirit, and physical being as consisting of action and reflection—a praxis... this human activity as theory and practice, reflection, and action. He calls for the revolutionary effort to radically transform oppressive structures (individuals or state perpetrators of violence) not by the designation of leaders as its thinkers as mere doers, but for the authentic empowerment of the oppressed from within to lead the path to their own liberation. The healing, survival, caretaking, and caregiving of a client, community, and advocates is a practice of empowerment, mutual respect, struggle, and perpetual hope in the restoration of justice, dignity, self-worth, and a future that values and is free of the pain of violence and oppression (Gomez and Yassen, 2007, p. 261).

Lorde (2007) expresses how everyday relationships promote health.

For women, the need and desire to nurture each other is not pathological but redemptive, and it is within that knowledge that our real power is rediscovered. It is this real connection which is so feared by a patriarchal world. Only within a patriarchal structure is maternity the only social power open to women. Interdependency between women is the way to a freedom which allows *I to be*, not in order to be used, but in order to be creative. This is a difference between the passive *be* and the active *being*... Difference must be not merely tolerated but seen as a fund of necessary polarities between which our creativity can spark like a dialectic. Only then does the necessity for interdependency become unthreatening. Only within that interdependency of different strengths, acknowledged, and equal, can the power to seek new ways of being in the world generate, as well as the courage and sustenance to act where there are no charters.

Within that interdependence of mutual (nondominant) differences lie that security which enables us to descend into the chaos of knowledge and return with true vision of our future, along with the concomitant power to effect those changes which can bring that future into being. Difference is that raw and powerful connection from which our personal power is forged...

Without community there is no liberation, only the most vulnerable and temporary armistice between an individual and her oppressor (p. 111).

Lorde (1984, 2007) recommends that "material-relations between women" necessitate an "examination of mutuality between women, systems of shared support, and interdependence existing between" (p.11).

Their teachings, leadership, and scholarship guided my investigation and vision for my dissertation synthesis, critique, exploration, and path toward human dignity, knowledge integrity, and opportunities to nurture resilience and promote healing in the community and through the research experience.

My dissertation purpose and methodology attempt to restore human dignity and knowledge integrity often lost in traditional, positivist research investigating interpersonal violence and CPP. This discourse, "dignity" and "integrity," draws on healing features -moving toward wholeness. To challenge me and demonstrate how research processes can serve as praxis for growth.

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- Zondervan, K. T., Becker, C. M., & Missmer, S. A. (2020). Endometriosis. *N Engl J Med*, 382, 1244–1256.

VITA

Anna Baccellieri, MPA

EDUCATION

University of Illinois Chicago, School of Public Health, Community Health Science 2013- 2023

Candidate - Doctor of Philosophy (Ph.D.) in Public Health

Chicago, Illinois

Dissertation

Anti-Oppressive and Community-Engaged Praxis in the Study of Chronic Pelvic Pain and Interpersonal Violence

Three Manuscript Format*

- *Crafting an Anti-Oppressive Praxis for Community Health Equity Trauma Research*
- *Anti-Oppressive Convergent Phenomenological Mixed Methods Research: Healing and Resilience Experienced by Survivors of Interpersonal Violence with a History of Chronic Pelvic Pain in Chicago*
- *Participatory Development of Research Guidelines for Interacting with Co-Researchers, Participants, and Collaborators with Trauma Awareness*

Committee

Jeni Hebert-Beirne, Ph.D., M.P.H. (Chair and Advisor), Brenikki Floyd, Ph.D. M.P.H., Geraldine Gorman, R.N., Ph.D., Brenda Parker, Ph.D., M.S., Colleen Fitzgerald, M.D., M.S.

* Dissertation research generated data for a minimum of 11 journal articles, in preparation, and non-traditional academic dissemination outputs.

University of Illinois Chicago, College of Urban Planning and Public Affairs, Fall 2006 – Summer 2008

Master's in Public Administration (M.P.A.)

Chicago, Illinois

Dual Concentration:

Public Management, Public Administration Department and
Community Development, Urban Planning and Policy Department

Capstone Thesis contracted by The Office of Women's Health (O.W.H.) Region V,
U.S. Department of Health and Human Services (D.H.H.S.), Fall 2007, *Needs Assessment of Women Veteran Health Services Increase Trauma-Informed Care*

Awards/Recognition/Service

- Pi Alpha, National Honors Society
- American Society for Public Administration (ASPA) Conference Scholarship Award
- Public Administration Student Association Officer, Fall 2007 – Spring 2008

University of Illinois Chicago, College of Liberal Arts and Sciences Fall 2002 – Summer 2004

Bachelor of Science (B.S.), Sociology (major), Communications (minor)

Chicago, Illinois

Research and Scholarship Awards:

- First Place, Social Science Research Award, UIC Undergraduate Research Symposium, Spring 2004, *The Significance of the Women's Movement Reflected Today by Feminist Scholarship*
- *Great Cities London* scholar and scholarship award, a select study abroad program, Spring – Summer 2004, *Housing Development along the Thames and Chicago Rivers*
- Dean's List, Fall 2002, Spring 2003, Fall 2004

ADDITIONAL EDUCATION

University of Michigan, Mixed Methods Program
Certificate of Completion Ann Arbor, Michigan
Designing and Conducting a Mixed Methods Dissertation Workshop
October 24 – 26, 2018

University of Illinois Chicago, School of Public Health
Basic Certification in Public Health
Chicago, Illinois
Spring 2011 – Spring 2013

Loyola University Chicago, College of Liberal Arts and Sciences
Spring 2002
Certificate in Urban Studies and Policy
Chicago, Illinois
Loyola Center for Urban Research and Learning (CURL)

Gonzaga University
Fall 2000 – Fall 2001
Spokane, Washington

PROFESSIONAL EXPERIENCE

Director of Qualitative Analysis
Renalis
April 2023 – Present

Co-Principal Investigator

National Institutes of Health (NIH), Understanding Chronic Conditions Understudied Among Women, R21 Exploratory/ Developmental Research Grant Award Submission
Culturally Adapt and Assess the CeCe™ Urinary Incontinence (UI) Digital Therapeutic Platform for the Full Spectrum of the US Latina Population: Sequential Mixed Methods Research
Renalis, University of California Los Angeles (UCLA), University of California San Diego (UCSD), in review
NIH Small Business Innovation Research, in preperation

National Community Engagement Research Consultant
Patient-Centered Outcomes Research Institute (PCORI). PCORI 2021 Cycle 2
Remote
May 2021 – Present

Nonsurgical Options for Women with Urinary Incontinence. Beta-Agonist versus Botox Trial for Urgency Urinary Incontinence (BEST Trial). Co-PIs: Sung, V., Jepperson, P. The Warren Alpert Medical School of Brown University and the University of New Mexico Health Sciences Center. Co-Is Site PIs: Lukacz, E., Richter, H., Sanses, T., The University of San Diego California, University of Alabama-Birmingham, and Howard University

- In response to PICORI FOA, Co-PI's sought consultation for design and implementation of a community engagement model that would serve the unique needs of each research location in reaching their proposed trial aims.
 - Consultation included background and rationale for community engagement leveraging existing university partnership resources and local capacity building.
- Supported the development of the manual of procedures (MOP).
- Collaborated with the PI and team leading the community engagement team in conducting site conversations/needs assessments to support study community engagement capacity grounded in their unique strengths and challenges.

Visiting Senior Research Specialist/Research Coordinator/Grant Co-Author May 2017 – July 2020
University of Illinois Chicago, School of Public Health, Community Health Sciences
 Chicago, Illinois

National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), Prevention of Lower Urinary Tract Symptoms (PLUS) National Research Consortium. U01 DK106898, MPI: Brubaker/Mueller, 07/01/2015 – 06/30/2020.

Site PI: Hebert-Beirne, J. Loyola University Chicago (flow-through from NIDDK). *The Loyola PLUS Clinical Center*. UIC-SPH and Howard Brown Health are partners in the Loyola Prevention of Lower Urinary Tract Symptoms Clinical Center (L-PLUS-CC) at Loyola University Chicago, Stritch School of Medicine (LUCM).

- The Center represents a transdisciplinary team, including community-based organizations, uniquely suited to contribute to planning, performing, and analyzing research studies necessary to establish the scientific basis for future prevention studies for lower urinary tract symptoms (LUTS) and conditions in women and sexual and gender minorities.
- Led the UIC-SPH team and advised research teams at other sites (i.e., LUMC, UAB, UCSD, Yale, UMich, UMN, WashU) toward inclusion of and engagement with groups that have been historically marginalized or exploited in clinical research, including Black, Latina/x, and South Asian women and sexual and gender minorities across life course age groups.
- **Co-authored initial grant** (i.e., conceptual design, the community-engaged study aims and design) 2014; funded 2015; hired as Senior Research Specialist 2017.
- **Co-authored an NIH, NIDDK Supplemental Grants award**, including budget development. Adolescent-Bladder Health Instrument (BHI) Development & BHI Spanish Translation, PI: Mueller, UIC-SPH PI: Hebert-Beirne, J. 07/1/2019-06/30/2020. Total Direct Costs: \$175,850.
- Worked with Principal Investigators to provide leadership on strategy and management of research studies, influencing organizational development, including implementation of priorities, community engagement, participation, sustaining partnerships, and organizing meetings.
- Developed project management planning documents, including GANTT charts, and metrics that our team used to track progress and continuous improvement for multiple, simultaneous studies. Advised other sites on our project planning methods.
- Captured metrics of community-engagement research practices and outcomes to inform the PLUS Research Consortium to support their project planning and solve problems.
- Trained* and collaborated with 4 graduate research assistants (RAs, MPH students) in community-engaged research processes and focus group, survey, and clinical data collection and research capacity-building using place-and-strength-based strategies in diverse Chicago neighborhoods.

- Supported RA learning of research methods: conducting literature reviews using library resources, annotated reviews, qualitative and survey data collection best practices, qualitative analysis and interpretation, statistical analysis, mixed methods research design and analysis, research ethics, and project management.
- **Community engagement site lead** and PLUS Community Engagement (CE) Committee member
- Led site *community conversations* with *Rapid Assessment Partners (RAPs)* comprised of community members and stakeholders for insights into successful interactions between the research teams and community participants and organizations, study priorities, data collection procedures, recruitment materials, and desired dissemination outputs.
- Reported *community conversation* themes to PLUS Research Consortium to integrate community priorities and modify study protocols, procedures, and materials, and improve research team training.
- Initiated site development of the Community Advisory Board (CAB).
- Supported PLUS CE Committee in developing CE activities and Consortium-wide processes and dissemination outputs (e.g., lay language article summaries, tweets, website content, community member-checking, bladder health 101 community talks)
- **Research coordinator** (e.g., contributed to protocols with PI and Co-Investigator teams and data collection materials, developed manuals of procedures [MOPs], and study materials; developed detailed tasks and timelines for L-PLUS-CC protocols and projects and contributed to the national project plans, IRB management [including smart IRB], national committee membership, close collaboration with finance and HR project coordinator and community-based partners; supported REDCap project and survey development) and **qualitative interviewer** on PLUS-funded protocols:
 - *Study of Habits, Attitudes, Realities, and Experiences (SHARE) Focus Group Study*
 - Led the development of a trauma-informed focus group protocol and online moderator training with a transdisciplinary, national team of PIs and research coordinators (2017) and supported modification of trauma-informed protocol and training for use with

- sexual and gender minority (2018) and adolescent focus group participants (2019).
- Collaborated with community organizations in three Chicago neighborhoods in the implementation of six focus groups:
 - Recruited, screened, enrolled, consented, co-moderated, oversaw data management, and cleaning of 3 English-speaking focus groups in North Lawndale community area, ages: 65+ Black women and Albany Park community areas, ages, 26 – 44 and 45 – 64 diverse ranges of SES, immigration experiences, racial, ethnic identifies (Black, Latinx, Asian).
 - Partnered with Spanish-speaking consultants and completed recruitment, screening, enrollment, screening, implementation, transcription, and translation of 3-Spanish speaking focus groups, ages: 26 – 44, 45 – 64, and 65+ in the South Lawndale community area.
 - Led the Spanish-language data management processes with the Loyola-UIC SPH and University of San Diego (UCSD) teams.
 - Co-developed a glossary of Spanish terminology and phrases related to lower urinary tract symptoms (LUTS) that reveal cultural meanings and do not have a direct translation to English.
 - Supported development, implementation, and evaluation of the online supplemental focus group training for national, multi-site qualitative researchers
 - *Clarification of Language, Evaluation, and Refinement (CLEAR) of Bladder Health Instrument (BHI) and Bowel Function and Toileting Environment (BFTE)*
 - Conducted cognitive interviews (CIs) of the BHI and BFTE instruments with diverse communities, cis-women, adult (n = approx. 50; ages 18 – 25, 26 – 44, 45 – 64, 65+) participants in various Chicago community settings (e.g., libraries, older adult centers, community centers, park districts), documented, managed, and co-analyzed CI data.
 - Led community recruitment, screening, and enrollment.
 - Member of the national PLUS CI team, supporting CI training and co-analysis.
 - *Validation of Bladder Health Instrument for Evaluation in Women (VIEW)*
 - Led clinical, community-based, and engaged recruitment, screening, and enrollment with Loyola clinical and UIC community teams (n = approx. 100)
 - Established new community and academic partnerships, involving collaborative strategies for optimal recruitment and enrollment of under-

- o resourced community adult, cis women.
 - o Problem-solved time-sensitive barriers to screening, enrollment, and accurate completion of two study visits and study activities (i.e., bladder diary with urine measurements, surveys, bladder scan, urodynamics).
- *Where I Go Application, An Ecological Momentary Assessment (EMA) Study*
 - o Led recruitment, screening, and enrollment of approx. 30 under-represented older adult community-based women to participate in 2 study visits and interact with the App to collect EMA data on their toileting behaviors.
 - o Developed data collection materials and trained interviewers.
 - o Facilitated and co-facilitated PLUS national meetings with PIs and research coordinators.

* In addition to training, offered mentorship (informal) support to graduate students as they sought. Connected students to UIC-wide resources for mental health and financial support, advocacy tools for obtaining better benefits and salaries, qualitative analysis to support their work as RA's on other PI funded-studies, mentorship for their practicums and capstone projects.

Visiting Senior Research Specialist/Research Coordinator

August 2017 –

December 2018

University of Illinois Chicago, School of Public Health, Community Health Sciences Chicago, Illinois

National Institutes of Health (NIH), National Institute of Diabetes and Digestive and Kidney

Diseases (NIDDK), *Prevention of Lower Urinary Tract Symptoms (PLUS) National Research*

Consortium. Sexual Gender Minority (SGM) Focus Group Study, Sexual Gender Minority Research Office (SGMRO), Office of Research on Women's Health (ORWH), Office of Behavioral and Social Science Research (OBSSR). MPI: Brubaker/Mueller, 07/01/2015 – 06/30/2020. Community partner, Howard Brown Health (HBH) (PI: Hardacker, C. Site PI: Hebert-Beirne, J.

- Led IRB submission at UIC and community-based organization (CBO), HBH, partner.
- Developed and implemented the research coordinator and focus group moderation training for the partner, CBO team to conduct 6 focus groups with sexual gender minorities, including people identifying as queer, non-binary, lesbian, and transmen.
- Focus group data co-analysis, interpretation, and journal article write-up.

Visiting Senior Research Specialist/Interviewer

August 2017 – December

2017

University of Illinois Chicago, School of Public Health, Institute for Health Research and Policy Chicago, Illinois

National Institutes of Health (NIH), National Cancer Institute (NCI), 08/10/2015-7/31/2021,

Context and Subjective Experience Surrounding Dual Cigarette and E-Cigarette Use

PIs: Mermelstein, R., Diviak, K., Hederker, D.

- Conducted interviews to enhance ecological momentary assessment (EMA) app data compliance and usability through training and debriefings with people from

traditionally underrepresented groups in research who dual use e-cigarettes and cigarettes.

- Collected urine samples for genetic analysis.
- Conducted validated Timeline Follow Back (TLFB) smoking calendars interviews.

Visiting Senior Research Specialist/Project Manager

August 2015 – July 2017

University of Illinois Chicago, College of Nursing, Biobehavioral Nursing Science
Chicago, Illinois

U.S. Department of Health and Human Resources. Health Resources and Services
Administration

(HRSA). Bureau of Health Workforce (BHW): Division of Medicine and Dentistry.

Geriatrics Workforce Enhancement Program (GWEP). HRSA-15-057. U1QHP28730. PIs:

Gruss, V./Hasnain, M. \$2.5M

- Managed development, implementation, and evaluation of multiple interprofessional older adult health engagement and education projects with faculty and clinicians across 6 colleges, 5 community partner organizations, national experts, older adults from traditionally marginalized communities, Dementia Guide App programmers, and a creative film team
- Developed evaluation instruments and analyzed evaluation data.
- Wrote grant progress, performance reports, revised budget, and carry-forward requests.
 - Recognized by HRSA Program Officer for the content of a grant progress report in 2018.
 - HRSA Program Officer presented a grant progress report presented as an exemplar for all GWEP-funded projects in 2018.
- Lead development and production of 32-online continuing education evidence-based films in a year's time and attained continuing education (CE) accreditation for

6 health

professions: medicine, nursing, pharmacy, occupational therapy, physical

therapy,

dentistry

- Integral part of the design team for the engageil.com online learning management system platform and website.
- Collaborated with community partners, senior residents, and caregivers providing interactive health education programs, and connecting residents to community resources
- Co-designed and oversaw the development, implementation, and evaluation of Interprofessional Geriatric Summer Scholars
- Program providing dyadic and experiential curriculum with community partner sites.
- In collaboration with the UIC Nursing Business Manager, oversaw vendor accounts, contract negotiations (along with the HRSA Project Officer), and consultant contracts.

Visiting Senior Research Specialist/Research Coordinator

July 2010 –

August 2015

University of Illinois Chicago, School of Public Health, Institute for Health Research and Policy
Chicago, Illinois

National Institutes of Health (NIH), National Cancer Institute (NCI), *Social Emotional Context of Adolescent Smoking Patterns*. PAR-0-025, 08/13/2010-7/31/2016, Total Directs: \$8,713,361: 8/13/10-7/31/16. Supplement Administrative Supplement: *Use of*

New and Emerging Tobacco Products in Young Adults, 8/1/12-7/31/16 Total Directs: \$1,503,958. PIs: Mermelstein R, Berbaum M, Cook E, Diviak K, Gonzalez R, Hedeker D, Hedeker D, Jones S, Kassel J, Kenyon R, Leigh J, Matthews A, Wakschlag, L.

- Recruited to manage Participant Interaction Core: team management of longitudinal, multiple methods, ecological momentary assessment (EMA), questionnaire, and saliva data collection and retention activities
- Supervised and trained a team of 29 staff in research methods and ethics.
- Completed performance evaluations for staff.
- Oversaw project workload and workflow processes.
- Achieved high compliance with EMA protocol, with a response to 87% of random interview prompts across the study week.
- Coordinated daily research and project objectives, data collection schedules, reporting, participant incentives (at its peak \$3000-\$4000 per day), and team reimbursements.
- Led team in attaining an 84.8% retention rate going into the 8th study year among a diverse sample of 1260 young adults.
- Oversaw the development of protocols, study materials, and retention materials.

Assistant Director (2009-2010)/Program Coordinator (2007-2009)
Summer 2008

Fall 2006 –

University of Illinois Chicago, College of Urban Planning and Public Affairs
Chicago, Illinois
Urban and Public Affairs Undergraduate Program

- Launched and co-ran a new undergraduate degree program with an initial limited operating budget.
- Collaborated across university departments to institute policies and programming.
- Carried out day-to-day program operations, including all admissions, student advising, registration, and records,
- recruitment strategies and events; HR, finance, grants management
- Partnered with community organizations to create engaged student learning opportunities and mentored all the
- students throughout these experiences.
- Supervised, trained, mentored, and offered ongoing feedback to graduate assistants.
- Taught urban studies, public service, and engaged learning seminars to high school and college
- Established ongoing relationships with community college and high school teachers, and admissions teams to educate their students on the Urban and Public Affairs (UPA) programs and career fields
- Co-implemented the Atlantis Programme, a transatlantic degree program awarding student international exchange programs with Politecnico di Milano, Milan, Italy, University of Bristol, United Kingdom, and the University of Illinois Chicago.
- Conducted, analyzed qualitative and quantitative, and reported on program and course evaluations.
- Developed a UPA program resource handbook.
- Awarded the *National Association for Academic Advisor Conference Scholarship* from UIC.

Visiting Research Specialist/Field Researcher

March 2005 –

August 2007 **University of Illinois Chicago**, School of Public Health, Institute for Health Research and Policy Chicago, Illinois
National Institutes of Health (NIH), National Cancer Institute (NCI),
5P01CA098262-10 Social *Emotional Context of Adolescent Smoking Patterns*. Total Directs: \$9,439,613, 9/22/04-8/12/10. PI: Mermelstein, R.

- Increased study recruitment rates across diverse Chicagoland youth communities by leading innovative and energetic strategies.
- Co-created and implemented retention protocol resulting in 90% (wave 3, 15-month follow-up) among 1260 adolescent participants.
- Administered screening surveys to all freshman and sophomore students at 14 high schools.
- Enrolled, randomized, scheduled, and completed study visits with youth in high schools and community locations.
- Solved problems with participants to increase compliance in recording their EMA data (e.g., daily, real-time smoking and substance use and associated mood, relational, and place factors).
- Assisted in training and supporting new field researchers.

Administrator of Regulatory Compliance

August 2004 –

March 2005

The University of Chicago, The University of Chicago Medical Center,
Chicago, Illinois

Office of Clinical Research, Biomedical Sciences Institutional Review Board (IRB)

- Reviewed human subject research protocols and advised study personnel to ensure IRB compliance.
- Coordinated all aspects of IRB Committee management, including protocol review by Committee members and reporting to Principal Investigators.

Institutional Review Board Administrative Reviewer

January 2003 – August 2004

The University of Chicago, The University of Chicago,
Chicago, Illinois

Social Behavioral Sciences Institutional Review Board (IRB)

- Reviewed human subject research protocols for IRB compliance.
- Converted hardcopy protocols into digital format.

OTHER INDEPENDENT COMMUNITY-ENGAGED, QUALITATIVE, AND MIXED-METHODS RESEARCH

Focus Group Moderator and Lead Qualitative Analyst, Consultant

November 2022

– May 2023

University of Illinois Chicago, College of Pharmacy at Rockford. Focus Groups with Remote
College of Pharmacy Residency Students to Explore Their Experiences in Their Internal Research Sites:
Medicine Rotation Co-PIs: Renee Olson, H., Hemenway, A. Rockford and Chicago, Illinois

- Conduct focus groups on the Zoom platform about the internal medicine rotation for pharmacy residents.
- Lead and teach the collaborative research team qualitative data analysis using Computer-assisted qualitative data analysis software (CAQDAS).

Conversations on Bringing a Trauma-Informed Practice to Pilates

February 2018 –

March 2018

Mind Art Core (m.a.c.). Local Pilates studio. Previously in the Ravenswood community area,
Chicago, Illinois

- Consultation on integrating trauma-informed practice into Pilates, community activism, and research methodologies.

Mixed Method Program Evaluation

December 2017 –

February 2018

Lumos Transforms. *Pilot of the Resilience Toolkit Program with Empower Generations: Remote Mixed Method Program Evaluation*. The Resilience Toolkit.

Evaluation Site:

- Collaborated in program evaluation design, qualitative, Antelope Valley, Los Angeles, California data analysis, interpretation, and write-up.

Ethnography and Strategic Planning

Summer 2010

The Space Movement Project (TSMP)

West Town,

Chicago, Illinois

Research Assistant

2004 – 2006

The Newberry Library, Chicago History Fair

Chicago, Illinois

- Supported 3-year evaluation of The Chicago History Project pilot. Chicago, Illinois
- Conducted data analysis; ran descriptive statistics and qualitative thematic analysis.

PEER-REVIEWED PUBLISHED MANUSCRIPT

Hardacker CT, **Baccellieri A**, Mueller ER, Brubaker L, Hutchins G, Zhang JLY, Hebert-Beirne J. Bladder Health Experiences, Perceptions and Knowledge of Sexual and Gender Minorities. *Int J Environ Res Public Health*. 2019 Aug 30;16(17). doi: 10.3390/ijerph16173170. PubMed PMID: 31480302. PMCID: PMC6747507.

ACADEMIC CONFERENCES

Low LK, **Baccellieri A***, Brady SS, Bavendam T, Burgio KL, Camenga D, Hardacker C, James A, Newman DK, Nodora J, Rudser K, Williams BA, Hebert-Beirne J; Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. Distress protocol for focus group methodology: Bringing a trauma-informed practice to the research process for the Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium Study of Habits, Attitudes, Realities, and Experiences (SHARE) Study. Oral Presentation at American Public Health Association (APHA) Annual Meeting; November 12, 2018; San Diego, CA.

Gruss, V., Hasnain, M., Koronkowski, M.J., **Baccellieri, A**. Transforming Healthcare with Mobile Devices: A "Dementia Guide" App for Persons with Dementia and Caregivers. Poster Presentation at American May 17, 2017; San Antonio, Texas.

Gruss, V., Hasnain, M., Koronkowski, M.J., **Baccellieri, A**. Connecting the Dots: Participatory Health Education and Empowerment Program with Older Adults. Oral Presentation at American Geriatrics Society (AGS) Annual Scientific Meeting. May 17, 2017; San Antonio, Texas.

Hasnain, M., Gruss, V., Koronkowski, M.J., Peterson, E., **Baccellieri, A**. Transforming Health Professions Education to Build the Interprofessional Primary Care Geriatrics Workforce. American Geriatrics Society (AGS) Annual Scientific Meeting. May 17, 2017; San Antonio, Texas.

Rah'man, A.; **Baccellieri, A**. ♦ Understanding Climate Change Through Place: A Mixed Methods Exploration. CI 594: Mixed Methods Course Research Forum, University of Illinois Chicago. April 2015, Chicago, Illinois.

*Indicates poster wherein AB was the sole presenter.

♦ Indicates poster where AB was a co-presenter/co-author of the presentation.

INVITED COLLOQUIA

Hardacker, C., Hebert-Beirne, J., **Baccellieri, A.** ♦ Study of Habits, Attitudes, Realities, and Experiences (SHARE - MORE), Sexual and Gender Minority Opinions and Realities Focus Group Study. Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. May 2019. Webex.

Jaimes, A., Hebert-Beirne, J., **Baccellieri, A.** ♦ Community Engagement (CE) Concept Proposal. Prevention of Lower Urinary Tract Symptoms Research Consortium (PLUS). April 2018, Webex.

Low LK, **Baccellieri A**♦, Brady SS, Bavendam T, Burgio KL, Camenga D, Hardacker C, James A, Newman DK, Nodora J, Rudser K, Williams BA, Hebert-Beirne J; Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. Distress protocol for focus group methodology: Bringing a trauma-informed practice to the research process for the Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium Study of Habits, Attitudes, Realities and Experiences (SHARE) Study Manuscript Concept Proposal. Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. 2018. Webex.

Hardacker, C., Hebert-Beirne, J., **Baccellieri, A.** ♦ Study of Habits, Attitudes, Realities, and Experiences, Sexual and Gender Minority Opinions and Realities (SHARE - MORE) Focus Group Study. Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. January 2018. Webex.

Baccellieri, A.*. Informed Consent Form Process with Communities Historically Marginalized in Research. Loyola University Chicago Medical Center (LUMC) Urogynecology Fellowship Dyadic. February 2018, Maywood, Illinois.

Low LK, **Baccellieri A**♦, Brady SS, Bavendam T, Burgio KL, Camenga D, Hardacker C, James A, Newman DK, Nodora J, Rudser K, Williams BA, Hebert-Beirne J; Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. Distress protocol for focus group methodology: Bringing a trauma-informed practice to the research process for the Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium Study of Habits, Attitudes, Realities and Experiences (SHARE) Study. Prevention of Lower Urinary Tract Symptoms (PLUS) Research Consortium. November 2018. Webex.

Baccellieri, A.* (September 2018). Informed Consent Form Process with Communities Historically Marginalized in Research. The Greater Lawndale Healthy Work (GLHW) Project, Community-Based Participatory Research (CBPR) Collaborative Retreat at Lawndale Christian Health Center Senior Center, Chicago, Illinois.

*Indicates colloquia wherein AB was the sole presenter.

♦ Indicates **colloquia** where AB was a co-presenter/co-author of the presentation.

COMMUNITY DISSEMINATION/REPORTS

Acevedo, M.G., Hutchins. G., **Baccellieri, A.** ♦ Healthy Bladder 101: Community Conversations (NIH Prevention of Lower Urinary Tract Symptoms (PLUS) Community Engagement Dissemination Experience— "Give Back"). June 10, 2019, with women community members from and at St. Agnes Parish in South Lawndale Chicago, Illinois.

- Co-developed the Health Bladder 101 Community Conversation Curriculum in conjunction with member checking for the PLUS SHARE focus group study.
- Coordinated the presentation material's translation into Spanish and a Spanish-speaking presentation team.
- Hosted and coordinated the event with our community partners and our presentation team.

Acevedo, M.G., Hutchins, G., **Baccellieri, A.** ♦ Healthy Bladder 101: Community Conversations (NIH Prevention of Lower Urinary Tract Symptoms (PLUS) Community Engagement Dissemination Experience— “Give Back”). July 26, 2019, with intergenerational women community members from and at the Telpochcalli Community Education Project (TCEP) Community Garden, Little Village/South Lawndale community area, Chicago, Illinois.

- Co-developed the Health Bladder 101 Community Conversation Curriculum in conjunction with member checking for the PLUS SHARE focus group study.
- Coordinated the presentation material’s translation into Spanish and a Spanish-speaking presentation team.
- Hosted and coordinated the event with our community partners and our presentation team.

Baccellieri, A. ♦ (Several classes each season, 2017). Participatory Health Education and Empowerment Program with Older Adults Living in Affordable, Intergenerational Residences from and at the Housing Opportunities and Maintenance for the Elderly (H.O.M.E.) in the Rogers Park community area, Chicago, Illinois.

- Designed, taught, coordinated guest teachers, and evaluated a holistic social-ecological, place-based older adult health curriculum drawing on community-based research principles (CBPR).

Alives, S., **Baccellieri, A.***, Bamberger, B., Hoover M., Parsigian, T., Tobias, S. (April 2013). *Community-Based Participatory Research (CBPR) HOPE Response Coalition: South Lawndale/Little Village Community Health Assessment, Access to Care, a Health People Chicago Priority*, PI, Hebert-Beirne, J, CHSC 431 in Partnership with Little Village Community Organizations, Spring 2013, South Lawndale Library, Chicago, Illinois.

Baccellieri, A.*. (2010). The Space Movement Project (TSMP) Non-Profit, Evaluation of Goals, Roles, and Collaborative Process to Inform Strategic Planning: A Participatory Research Methods and Strategic Planning Process. TSMP Community Space, Chicago, Illinois.

Baccellieri, A. ♦, Cicero, K., Kimp, T., Pennoyer, K. (December 2007). *Needs Assessment of Women Veteran Health Services Increase Trauma-Informed Care*. The Office of Women’s Health, Region V, Department of United States Health and Human Services, Chicago, Illinois.

*Indicates community dissemination wherein AB was the sole presenter.

♦ Indicates community dissemination wherein AB was a co-presenter.

COURSE INSTRUCTION

Guest Lecturer. CHSC 584 Community Organizing for Health Budgeting for Community Health Research Projects. *Budgeting for Community-Engaged Research Projects*. University of Illinois Chicago, School of Public Health, Community Health Sciences Division. Spring 2018. Chicago, Illinois.

Guest Lecturer. Summer 2015. University of St. Francis. MPH. 531. Public Health Perspective of Chronic Disease Epidemiology. *Epidemiology of Chronic Disease*. Summer 2015. Joliet, Illinois.

Guest Lecturer. Spring 2015. CHSC 431. Community Assessment in Public Health. *Informed Consent Process in Focus Group Methodology*. University of Illinois Chicago, School of Public Health, Community Health Sciences Division. Spring 2018. Chicago, Illinois.

Be a Planner for a Day. College and High School Lesson. Engaged research lessons throughout multiple Chicago and metropolitan high schools, universities, and community colleges. 2007-2010. Developed and taught lessons.

MANUSCRIPTS (In Preparation)

- A Community Health Equity Perspective: Gaps in the Study of Chronic Pelvic Pain and Interpersonal Violence
- The Ecosocial Context of Chronic Pelvic Pain and Interpersonal Violence
- Crafting an Anti-Oppressive Praxis for Community Health Equity Trauma Research

- Protocol Paper: Anti-Oppressive Convergent Phenomenological Mixed Methods Research: Healing and Resilience Experienced by Survivors of Interpersonal Violence with a History of Chronic Pelvic Pain in Chicago
- Participatory Development of Research Guidelines for Interacting with Co-Researchers, Participants, and Collaborators with Trauma Awareness
- 'I am a manager of oppression': Lived experiences of trauma expression in the research process
- Guidelines for Interacting with Co-Researchers, Participants, and Collaborators with Trauma Awareness
- What is CPP? Why is it relevant for Public Health?
- Distress Protocol for Focus Group Methodology: Brining a Trauma-Informed Practice to the Research Process for the Prevention of Lower Urinary Tract Symptom (PLUS) Consortium Study of Habits, Attitudes, Realities, and Experiences (SHARE) Study
- Polyvagal Theory and Public Health Education and Policy Implications

PROFESSIONAL MEMBERSHIPS

- American Public Health Association (APHA)
- Institute on Abuse, Violence, and Trauma (IAVT)
- National Partnership to End Interpersonal Violence Across the Lifespan (NPEIV)
- Futures without Violence (No membership option. Actively interact with their events and share their resources).
- International Pelvic Pain Society (IPPS) (2013-2017; 2023)
- The Health Alliance for Violence Intervention (HAVI) (application pending)

SKILLS

Participatory Action Research (PAR): community-based participatory research (CBPR), community-engaged research, program, and evaluation development and implementation; familiar with photovoice.

Qualitative data

Data Collection: Ecological momentary assessment (EMA), focus groups, lived experience research (phenomenological), oral history, photovoice, cognitive interviewing, semi-structured, structured, ethnography, case study, timeline follow back substance use/bladder/sleep/exercise calendars.

Analysis: descriptive and interpretive phenomenology, grounded theory, directed content analysis (DCA), thematic

Data management and Analysis Platforms: NVivo, Atlas – Ti, Dedoose

Mixed Methods

Designs: Convergent/Concurrent, Sequential, and Nested

Integration Points: Exploratory, Explanatory, Expanding, Building, Concordant, Discordant

Quantitative

Data Collection: Survey development; use of cognitive interviewing analysis to inform questionnaire item development; background and rationale for selecting anti-racist and intersectional items and trauma-informed approach to the selection of valid measures of violence, adverse childhood experiences of violence, and trauma.

Survey and screener development in *REDCap*, *Qualtrics*, and word processing.

Analysis: Descriptive statistics, linear regression, *t*-tests

SERVICE

Institutional

Member. University of Illinois Chicago (UIC) Restorative Justice, Advisory Committee Experts sub-group: Community-based Collaboration, 2023-Present.

Reviewer. University of Illinois

Member. UIC School of Public Health, Community Health Sciences Academic Partnership with Loyola University Medical Center, Urogynecology Department. National Institutes of Health (NIH). National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), Prevention of Lower Urinary Symptoms (PLUS) Research Consortium, 2017 – 2020

Co-Chair. National Multisite Project Coordinator Team, 2018 – 2019.

Site Representative and National Multisite Committee Member in the following groups, 2017 – 2020:

- Clarification of Language, Evaluation, and Refinement of Questions (CLEAR) Cognitive Interviewer Team for the Bladder Health Instrument (BHI) and the Bowel Health and Toileting Environment (BHTE) instrument.
- Community Engagement Committee and the Recruitment and Retention Sub-Committee
- National Multisite Project Coordinator Team
- Where I Go Mobile App

Assisted in UIC CHS 431 video, Spring 2013, Chicago, Illinois, <https://vimeo.com/72528278> and <http://civicsource.org/findanswers-detail/little-village-community-health-forums/>.

Member. Executive Advisory Committee on Strategic Planning, UIC College of Urban Planning and Public Affairs, 2009-2010, Chicago, Illinois.

Member. Financial and Human Resource Administrators, UIC College of Urban Planning and Public Affairs, 2009-2010, Chicago, Illinois.

Member. Safety, Security, and Building Conditions Committee, UIC College of Urban Planning and Public Affairs, 2007-2010, Chicago, Illinois.

Member. Student-Alumni Committee, UIC College of Urban Planning and Public Affairs, 2008-2010, Chicago, Illinois
Community

Board Member. John and Junes Mission. Empowering Cancer Survivors and Caregivers by Reducing Burdens and Providing Opportunities through Wilderness Experiences, 2017 – 2020, Remote. Boise, Idaho.

Pantry Volunteer, University of Illinois Health Pilsen Food Pantry, 2017-2020Pilsen, Chicago, Illinois.

Co-founder and Member. Pelvic Health and Trauma Taskforce: An Academic-Practitioner-and Community Led Collaboration with Rush University, UIC Community Health Science Affiliates, Women's Health Foundation (WHF), Total Control instructors, and Illinois Pelvic Floor Physical Therapists' Journal Club, 2010-2013, Chicago, Illinois.

- Initiated to improve the lives of women experiencing chronic pelvic pain and trauma symptoms.
- As a task force, defined key concepts, and identified potential research outcome measures.
- Conducted a landscape assessment in Chicago of the resources supporting survivors of violence using trauma-informed approaches, knowledge of pelvic health, and resources available to women with chronic pelvic pain.
- Collaborated with WHF and the task force to build relationships with Chicago Women's Health Center and Lesbian Care.

- Connection Project, and mentored and assisted the WHF intern/DePaul University MPH student in developing,
- collecting, and analyzing the provider questionnaires that examined their provider screening behaviors and patient
- symptoms relating to pelvic health and traumatic experiences.
- Conducted a landscape assessment of all Chicago domestic violence, sexual assault, and trauma resources.
- Rush University Medical Center's Abdominal & Pelvic Health Program hosted two professional development conferences with presentations on this topic.

Fundraising, Light The Night Walk, The Leukemia & Lymphoma Society, Chicago, Illinois 2013

Community Organizer, Obama for America Campaign, Chicago, Illinois, 2012 - 2013

Fundraiser Volunteer, Women's Health Foundation, Gala Committee Volunteer, Chicago, Illinois, 2011-2013

Gardening Volunteer, Gingko Gardens, Chicago, Illinois, 2006-2013

Volunteer, Future Leaders in Planning (FLIP), Chicago Metropolitan Agency for Planning (CMAP), Chicago, Illinois.

Member. Council Relations Committee (GCRC), 2007-2010, Chicago, Illinois.

Volunteer, Domestic Violence Greenhouse Shelter, Chicago Connections for Abused Women and their Children, 2004, Humboldt Park Chicago, Illinois.

National

○ *Sub-Committee Committee Member*, National Partnership to End Interpersonal Violence Across the Lifespan (NPEIV) Public Policy and Engagement, 2022-present, and Research Taskforce, 2020-2021

Ad Hoc Reviewer, American Public Health Association. Conference 2020, *Family Violence Prevention Caucus Program*, Spring 2020

Mentorship

Research Staff/Supervisees/Research Assistants/Graduate Assistants

- Trained, supervised, and engaged in co-learning with undergraduate, graduate (master's and doctoral), and post-doctorates in the abovementioned academic experiences.
- Several people sought out additional advice and mentorship, related to their academics and applying to graduate programs and careers, qualitative data collection and analysis, their capstone projects, university policies and procedures, and mental health and coping advice in academic positions and as students.